Current Issues in Bilingual Education

James E. Alatis
Editor
Bibliographic Notice

Since this series has been variously and confusingly cited as: Georgetown University Monographic Series on Languages and Linguistics, Monograph Series on Languages and Linguistics, Reports of the Annual Round Table Meetings on Linguistics and Language Study, etc., beginning with the 1973 volume, the title of the series was changed.

The new title of the series includes the year of a Round Table and omits both the monograph number and the meeting number, thus: Georgetown University Round Table on Languages and Linguistics 1980, with the regular abbreviation GURT 1980. Full bibliographical references should show the form:

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INTRODUCTION

The Georgetown University Round Table on Languages and Linguistics 1980 is concerned with 'Current Issues in Bilingual Education'. Bilingual education, although not a new or unexamined topic, still evokes hot dispute, passionate defense, and vehement attack. Indeed, interest in bilingual education is so intense, concern with its various aspects is so widespread, and the problems it poses are so complex as almost to demand that another Georgetown University Round Table investigate its 'Current Issues'.

This interest and commitment to bilingual education at Georgetown University is long-standing. The Georgetown University Round Table on Languages and Linguistics 1978 discussed 'International Dimensions of Bilingual Education'; prior to that, the Georgetown University Round Table on Languages and Linguistics 1970 examined 'Bilingualism and Language Contact'.

In passing, it is interesting to note that this long-standing interest and commitment to bilingual education on the part of the Georgetown University School of Languages and Linguistics was this year given official recognition by the United States Office of Bilingual Education when the university was awarded a Title VII grant which supports 15 fellows in the School of Languages and Linguistics doctoral program to prepare as trainers of teachers in bilingual education programs. That grant also recognized the working relationship which exists between the Georgetown University School of Languages and Linguistics and the Division of Bilingual Education of the District of Columbia Public School System. Coincidentally, the Division, under the direction of Marcelo Fernandez, sponsored a forum on bilingual education immediately prior to the Georgetown University Round Table.

One of the by-products of interest in bilingual education has been the increased attention it has focused on the need for more reliable procedures to test and assess language proficiency. Indeed one could argue that the testing and assessment of language proficiency is most probably the topic of greatest common
interest for all those engaged in language instruction, whether their field be bilingual education, the teaching of English as a second language, or the teaching of foreign languages. Consequently it was considered both a wise and practical step to schedule a pre-conference workshop on oral proficiency assessment.

This workshop also was held at Georgetown University and was sponsored by the United States Government Interagency Round Table, a coalition of United States government agencies involved with language teaching and research. As conference chairman, I am grateful to Dr. James Frith, Dean of the Foreign Service Institute School of Language Studies for lending his expertise to organizing and chairing the pre-conference workshop which proved to be so valuable for all who participated in it. The papers delivered at that Workshop have been published separately (Measuring Spoken Language Proficiency. 1980. James R. Frith, editor. Georgetown University Press, Washington, D.C.).

The nature of the recent impetus given to bilingual education has sometimes obscured the fact that attention to the maintenance of non-English languages and cultures predated passage of the Bilingual Education Act. Thus the inclusion of a panel cochaired by Joshua Fishman of Yeshiva University and by Dorothy Goodman of the International School, Washington, D.C., was an exciting reminder that perhaps it is the monolingual child who is underprivileged, and that bilingual education, fostered primarily through the efforts of ethnic and religious groups, has long been a part of the American tradition.

The first set of published papers from the Round Table presents two aspects of bilingual education: the public and the private. The public aspect is represented by Josué González, Director of the Office of Bilingual Education; the private by Joshua Fishman, who has dedicated a lifetime of work to chronicling the history of private support for bilingual education in America.

The next two panels focus on two major aspects of bilingual education: 'Bilingual Assessment', chaired by Marina Burt and Heidi Dulay and 'Research Directions in Bilingual Education', chaired by G. Richard Tucker of the Center for Applied Linguistics. As conference chairman I would like to state my indebtedness to each of these chairmen for the care with which they planned and organized these panels. The published papers from their sessions are clear evidence of the value of their professional collaboration.

Robert Lado who contributed so much to the ideological basis for bilingual education, was the featured speaker of the panel on 'New Developments in Bilingual Education'. His presence was indicative of his continued influence on the present generation of both theoreticians and practitioners.

The panel on 'Bilingualism as a Factor in Interpretation and Translation', cochaired by Margareta Bowen, Head of the
Division of Interpretation and Translation, Georgetown University, and Jean Delisle, Université d'Ottawa, brought to bear the experience of a practiced and practicing field, one in which the term 'bilingualism' is seen in a very different context.

The panel on 'Current State Level Assessment of Language Minority Students' provided insights into the procedures and practical applications employed by experienced educational administrators as they deal with the day to day problems connected with bilingual education.

The final session of the conference took up the always intriguing issue of 'Cross-Cultural Communication'. The variety of topics treated in this final session is but a suggestion of the many questions bilingual education has posed.

The conference in its entirety touched on only a few of the 'Current Issues in Bilingual Education'.

The present volume is offered both as the finished product of a single conference and the blueprint for many more. To all who contributed may I express my deep and abiding gratitude.

James E. Alatis
Dean, Georgetown University
School of Languages and Linguistics.
Chairman, Georgetown University Round Table on Languages and Linguistics 1980
The noted bilingual philosopher George Santayana once remarked, 'The great difficulty in education is to get experience out of ideas'. For years, the educational establishment in the United States and the general public have ignored the experience of a legion of international efforts in bilingual education, preferring instead to call our newborn American version an 'innovation'. We can only hope that this reincarnation of an ancient concept will not become another educational fad, but that it will provide us with the 'experience' necessary to serve our schoolchildren successfully.

Given the American democratic persona, the current interpretation of bilingual education somewhat resembles a small ship making its way through an immense ocean. Its journey is subject to 'waves' created by the sociopolitical and economic interactions common to the governance of educational programs in the United States. Being largely federally inspired, the bilingual education voyage is further affected by the vicissitudes and complexities of Washington. In order to understand fully the issues facing this educational 'innovation', it is necessary to analyze the nature of these wavemakers and the vectors they transmit.

Within the federal government, bilingual education policy and programming is influenced by input from Congress, the White House, and the United States Department of Education. The resurgence of bilingual education in the United States (it has existed here since the 1800s) is due mainly to the U.S. Congress that, in 1968, recognized the educational disenfranchisement of this country's ethno-linguistic minorities and passed the first Bilingual Education Act, also known as Title VII of the 1965 Elementary and Secondary Education Act. Since that historical act, Congress has twice restated its belief in this instructional treatment through passage of the 1974 and 1978 reauthorizations of the Bilingual Education Act. Given the
fact that congressional membership is restructured every two years, and that different legislators have reviewed each of the three bills, it would seem that bilingual education has appealed favorably to a widespread audience on Capitol Hill. Alas, the ghost of Santayana has apparently not been seen in those parts, for each succeeding Congress has sought to write the bilingual education story from page one. As a result, bilingual educators look toward the 1982-1983 reauthorization hearings with trepidation, fearing that the educational experience of some 3.5 million limited-English-proficient (LEP) youngsters will be decided on the basis of political compromise and expediency.

The bilingual education constituency has been well served by the present administration and the White House. The President has provided both ideological and financial support for dual language programs. Perhaps the most visible example of this sustenance has been the formation and subsequent report of the President's Commission on Foreign Languages and International Studies. The commission's statements on the importance of utilizing existing bilingual resources lent a conceptual boost to those who support the mission of Title VII.

The creation of the new Department of Education has not only provided our nation's schools with visible evidence of their priority status, but it has given Title VII a more viable framework within which to operate. The Office of Bilingual Education and Minority Languages Affairs (OBEMLA) has been expanded in scope and elevated to a higher level within the organizational structure. Bilingual advocates are carefully monitoring the activities of the new department, eager to gauge the direction of its policies. In addition to OBEMLA, various other departmental components are also deeply involved in the future of bilingual education, including the National Institute for Education (NIE), the Office of Civil Rights (OCR), and, last but certainly not least, the Secretary herself.

As I have mentioned, OBEMLA, the government agency charged with overseeing nearly all federally funded bilingual programs, has recently expanded its responsibilities to include the administration of services in bilingual vocational training and refugee education. The field of bilingual education has been plagued by not having a sound research foundation from which instructional programs can spring. We expect that NIE and its recently established National Center for Research and Development in Bilingual Education will be able to fill this void. As has been widely publicized, the United States Supreme Court addressed the issue of equal educational opportunity for LEP children in the Lau v. Nichols case. The Office of Civil Rights (OCR) is responsible for the enforcement of this historic decision. Through its policies and practices, OCR attempts to assist school districts to respond to the linguistic needs of nonnative English-speaking children. Finally, bilingual education advocates are indeed fortunate that Shirley
Hufstedler, the first Secretary of Education, is, to a great extent, in agreement with the philosophy and basic methodologies which undergird the movement. Her involvement with the concept dates back nearly to its inception, as she was a judge on the circuit court that reviewed the *Lau* litigation.

The American citizenry, weaned on a steady constitutional diet of separation of powers between the executive, legislative, and judicial branches of government, does not often realize that many laws are subject to review by the courts. In the bilingual arena, both federal and state courts have produced a variety of decisions which have had a great impact on educational strategies for meeting the needs of LEP students. These have not only dealt with instructional matters per se, but have also delved into such related areas as desegregation, school finance, and sex discrimination.

One of the most formidable problems facing our nation's school system is the establishment of a compatible relationship between state and federal efforts in education. State governments, constitutionally guaranteed autonomy for their own educational services, are increasingly looking over their shoulders to catch a glimpse at Big Brother's behavior. Washington, for its part, is sensitive to the problem, and has been careful to supplement, and not supplant, state services. To their credit, states have nearly kept pace with the federal entity in terms of bilingual funding ($93.8 million vs. $135 million, 1978-1979), and have made great strides in the areas of teacher certification and legislation. Fortunately, those responsible for administering bilingual programs at the state and local levels are making every effort at mutual cooperation.

It is important that the basic focus of all this activity—the local district and its schoolchildren—not be relegated to a minor role in a description of the interactions and issues facing bilingual education. Local authorities have responded admirably to the concept of capacity building, and are demonstrating their commitment to bilingual education on various fronts. These include the addition of bilingual instructional and counseling personnel, provision for dual language materials and resources, and sponsorship of a variety of linguistically related activities.

In a less specific manner, the general public, keenly aware of its role as the primary funding source for all of the entities I have mentioned, has made its wishes known more directly through the formation of politically oriented associations. Acting on behalf of bilingual education are organizations which represent this country's LEP population. Conversely, although similar in organizational design, there are numerous institutions supported by the majority citizenry which are opposed to the bilingual concept. There does appear to be a trend, however, toward the 'liberation' of an increasing number of monolingual English-speaking parents—as evidenced by the greater demands among this group to enroll their children in bilingual programs.
These, then, are the primary agents whose interactions create, and react to, the issues surrounding bilingual education. The activities they have initiated, as well as those to which they must respond, are played out within a national and international arena. Let us examine how our little ship is affected by these wavemakers.

The United States has been labeled an immigrant nation. Some 41 million people have adopted our country as their homeland since 1776. Recently, this phenomenon has become highly visible, as witnessed by the influx of thousands of Indochinese, Cuban, and Haitian refugees seeking asylum. In terms of the nation's LEP population, this development has merely piggybacked upon another, much greater, demographic reality—the population growth of the Hispanic segment of our country. Depending upon which media accounts one reads, the Spanish-speaking citizenry and (noncitizenry) will outnumber blacks as the nation's largest minority within one or two decades. It is interesting to note that both recent LEP immigrants and those who have lived in the United States for some time are becoming increasingly aware of the civil rights which come with the territory. Due to court decisions, legislation, and the activity of political networks, minority group members who might have been forced to the periphery of our society scarcely 20 years ago are now gaining mainline access to government-sponsored services. And, although every linguistic group features diverse goals and expectations, Washington is attempting to provide each with equal educational opportunity for their offspring. One method, of course, is through support for bilingual education, a program which promises to hitchhike not far behind the LEP population trends.

A second set of issues facing bilingual education centers around the nature of its governance and financial support. Since its inception in 1968, the Title VII program has sought to develop the capacity within state and local entities to assume at least a full partnership in the provision of monies for bilingual programs. And, as I have mentioned, it does appear as though state governments have almost pulled even in current funding levels. Unfortunately, the problems with the United States economy make some of us feel that the near future might see a lessening of Washington's financial contributions to this effort. There are an estimated 3.5 million limited English proficient (LEP) school-age children presently in need of bilingual services. Nine out of every ten of these youngsters must go without these services, for only 350,000 students are presently receiving an equal educational opportunity. Therefore, instead of looking to the future as a time when the federal government might divest itself of this financial responsibility, we must seek additional partners who are willing to join in the commitment.

One side effect of many federal educational programs is the parallel governance structures which they seem to create. The
separation of bilingual curricula from 'regular' school services (a somewhat offensive delineation, to be sure) creates difficulties within the profession which can affect in a negative way, the pupils who are supposed to benefit. However, through efforts such as capacity building, increased bilingual teacher certification, and state legislation, the problems produced by the federal-state governance dichotomy are slowly dissipating. As political and educational leaders become more cognizant of the need for bilingual education, and as various funding entities develop a greater shared capacity, larger numbers of students will be granted the opportunity for success in the American society.

As alluded to earlier in this paper, the future of bilingual education largely depends upon the deliberations of the American systems of lawmaking and jurisprudence. Indeed, in a heterogeneous society where four out of every ten citizens have engaged in litigation, the law-related population comes closest to approximating the European concept of a ruling class. Although the three bilingual education acts, the 1974 Lau v. Nichols decision, and a number of desegregation and school finance judicial activities have given bilingual education a favorable legal history, it is nonetheless as fragile a concept as the nuclear family. Indeed, as the Office of Civil Rights prepares to finalize the next chapter of the Lau saga, both bilingual advocates as well as opponents are readying their judicial tentacles, eager to exercise their First Amendment rights.

One area which is certain to receive legislative scrutiny is desegregation. It is not entirely clear how much time must be devoted to native language instruction, and the extent of classroom separation of LEP students, in order to guarantee a successful educational experience. What is clear, however, is that the threat of segregation can be buried forever with a widespread attitudinal change on the part of the monolingual American populace opposed to bilingual instruction. It is ironic that those most in need of dual language education are those who most strenuously clash with the movement's advocates. In its present form, bilingual education is seen as a 'compensatory' program, a type of intellectual overreaction for past sins. If the method were prized for its obvious potential advantages, and those who presently fight the concept henceforth put their energies to work for its improvement, segregation would naturally cease to be a legal and curricular question. Further, the greater numbers of Americans with dual language ability might reverse some of the unenviable political and economic setbacks which the United States has suffered on the international front.

At the crux of all this demographic, political, economic, and legal activity stand the few thousand bilingual programs currently in existence. Upon close examination, one can see that these efforts exhibit a dynamism born out of an incessant search
for quality. Their great concern for the best possible delivery system is buffeted by an expanding research agenda which has recently begun to pay dividends. Indeed, we are beginning to uncover information which seems to point in the direction of increased native language instruction prior to the English-only transition. An increasing number of program evaluations attest to the success of bilingual methodology with specific types of target populations. We have recently embarked upon an ambitious three-year study to pinpoint those instructional features which are significant in the academic performance of the bilingual child. The aforementioned National Research and Development Center in Bilingual Education, under the auspices of NIE, will continue to churn the bilingual waters in search of exemplary techniques. A new OBELLA-sponsored program which will foster the development of successful demonstration curricula will also add to the body of literature in support of the concept. Indeed, few opportunities will be left uninspected in the search for excellence in bilingual education.

It is no secret that public opinion pollsters have, in recent years, assumed powerful positions within our body politic. For it is to the public that all 'public' servants still remain beholden—and those who have the capacity to deliver that information are rewarded with priority status. It is for this reason that the findings of the President's Commission on Foreign Languages and International Studies have had such a large impact on the policymakers and legislators in Washington. For, while the Commission found that nine out of every ten Americans cannot speak, read, or effectively understand any language but English, it also revealed a stunning disregard for those citizens who do carry bilingual abilities. In response, the commission recommended increased utilization of these considerable human resources, not only in the educational world, but in the political and economic spheres as well. Once these suggestions bear fruit, and they have already received the support of both minority and majority audiences, the entire image of bilingual education will undergo a transformation. The result will be two-way bilingual programs, widespread bilingualism among the populace, and a rich transcultural experience for much of the American society.

These, then, are some of the interactions and issues which will affect bilingual education in the coming months and years. Whether we listen to Santayana and build upon this exciting experience remains to be seen. Ahead, wrapped within the folds of hope, some frustration and disappointment certainly lie. Nevertheless, such is the nature of life's worthy challenges, for the labors of today give birth to the accomplishments of tomorrow.
NOTES

1. The term 'Americans' is used here as it is in common practice, to mean those living in the United States. It is, of course, an inaccuracy since other citizens of the hemisphere also claim this designation.


Notwithstanding the long-term capitalist establishment, old line Marxist, and mainstream sociological deprecation of ethnicity (reviewed in Fishman 1978), and notwithstanding the more recent recrudescence of pseudo-intellectual anti-ethnicity alarms (see, for example, Epstein 1977, Patterson 1977), there may very well be more ethnic community sponsored mother tongue schooling in the United States today than there was 20 years ago. In the early 1960s, when last I attempted to estimate the magnitude and distribution of this universe, my best estimate pointed to 2,000 units that I had identified with certainty and roughly a thousand more that I 'sensed' were there but that I could not definitively locate (Fishman 1966). Now, 20 years later, I have fully identified nearly 5,000 units and still have a 'sense' of another 1,000 or more whose exact locations and languages have not yet been fully established. Although it may not be justified to conclude that ethnic community mother tongue schooling has tripled in these two decades under the impact of the 'ethnicity boom' of the late 1960s and the 1970s (trend studies for little studied phenomena are not overly reliable since they are unduly influenced by such inter-investigator or inter-study factors as 'auspices' and 'reputation'), there should be no doubt in anyone's mind that we are dealing with a quantitatively huge and much understudied (and underappreciated) universe of substantial significance for the total non-English language enterprise in this country. Such schools are to be found in every section of our country and, indeed, in every state of the Union, with even the 'least ethnic' parts of our country (the 'deep South' and the 'corn-belt') maintaining hundreds upon hundreds of such schools (Fishman 1980a).
How wasteful we are, in our rich America, and how uninformed are our language professions and disciplines, if we blithely overlook some 6,000 schools and some 600,000 children who, together, constitute a resource of talent, dedication, and experience that we might all profit from in various ways. Our collective, self-imposed ignorance and self-denial (or should we call it repression?) merit even more amazement and regret when one realizes that these schools represent an old and proud American tradition, that they are now primarily maintained by English-speaking (and often English-dominant) parents, that by all signs they are well established and unlikely to disappear, and that they obviously contribute to important aspects of total identity for millions upon millions of our citizens. The following remarks constitute no more than a minor attempt to provide an overview of this colorful and revealing universe of language life in the United States, a universe that fully merits the most serious consideration.

Some ideological and pedagogic assumptions. A number of articles of faith characterize the activists, teachers, and parents most fully involved in operating, supporting, and fostering ethnic community non-English mother tongue schooling in the United States (Fishman 1979). The most fundamental assumption is that there is an eternal relationship between their ethnicity and its associated language. Indeed, this assumption posits a crucial causal relationship such that the ethnic mother tongue is viewed as a truly Herderian (and Whorfian) dynamo. If ethnic continuity is at all conceivable without the ethnic mother tongue—and for many it is not—it is nonetheless viewed as emaciated, lifeless, joyless, and peculiarly unauthentic under such circumstances. Thus, use—even if traditionalized and ritualized—of the ethnic mother tongue is more than merely desirable; it is morally necessary, that is, it is an imperative that has ramifications and implications far above and beyond empirical verification or practical consequences. It is not so much interpersonal communication that such schools aim at—they do that, too—but a transcendental, intuitive, and infinitely subtle sensitivity, appreciation, and awareness of self, community, destiny, history, and the rarest of rare uniqueness and mysteries.

No wonder, then, given the depth of devotion lavished upon the language and ethnicity link, that stable bilingualism and bi-culturalism in the United States are viewed as attainable objectives rather than as impossible dreams. This is not to say that they are viewed as simple goals or inevitable attainments by any means. Nevertheless, given intense planning, devotion, and a constant search for better methods, materials, and implementational opportunities at a truly communal level, it is firmly believed that the ethnic community mother tongue school can and will make a significant and independent contribution to the total language maintenance and ethnic maintenance outcome.
Are these ideas irrational? contra-empirical? I would prefer to call them supra-rational convictions. Obviously, these schools are loci of community viability, creativity, and identity. Obviously, without them social alienation and dislocation would be even greater than they currently are in the United States. I reject the 'irrational' designation because there is ample evidence that effective ethnic mother tongue schools are operating on more than emotion alone. Indeed, there seems to be a mutually reinforcing feedback system between beliefs, practices, and attainments in many of the schools and communities involved, so that the more the foregoing assumptions are subscribed to, the greater the curricular innovativeness and the academic success of the schools involved. There is a very definite rapport and reward cycle in operation, so that parental time, effort, funds, love, concern, and reinforcement, on the one hand, and student-teacher attainment, on the other hand, are mutually and maximally reinforcing, at least insofar as esprit de corps is concerned. This is of no little moment in the life of a school and community, although it is, of course, not the same as language learning or language maintenance per se.

Actually, no miracles are to be reported along these latter lines. Generally speaking, these schools and their communities are far too weak to stem the tide of Americanization and anglicification that has progressively engulfed our public life as well as encroached upon our more private intimacy. With the exception of the Old Order Amish-Mennonites-Hutterites, the Hasidim and the Navajos, our ethnolinguistic minorities are more fond of their languages than they are fluent or frequent users of these languages. Viewed dispassionately from the outside, the ethnic community non-English mother tongue schools are distinctly secondary forces when confronted by the overall massive dislocation, de-traditionalization and secularization of modern American urbanization, industrialization, geographic mobility, destruction of inner city ethnic primary settlement neighborhoods, and growing intermarriage rates across religious and ethnic lines.

These schools have no magic wands to wave. If they pursue their goals somewhat more conscientiously than do most other schools, they accomplish them—like most schools—only moderately and modestly, at best. The parents (and often the teachers) maintaining and conducting the schools are generally English speakers (indeed, they are usually English dominant individuals); so are their children and pupils and so they will remain, by and large. Why then are these schools maintained at such great price in time and effort? Clearly, because the pursuits of biculturism—indifferently successful though it may be—is integratively functional and meaningful. These schools are now part of a pattern of ethnicity-in-America. They represent an American way of being ethnic and an ethnic way of being American: a particularistic, relatively stable, more
comfortably meaningful way of combining the mainstream with one's own unique side stream in a 'manageable way'. Rather than being reflections of foreignness, these schools now represent the indigenization of ethnicity as an American way of life.

Ethnicity as an American way of life. The National Council for Education Statistics has provided us with a means of testing for foregoing ethnographic conclusions, based upon visiting dozens of schools during the past few years. Its 1976 study of language use provides state-by-state data on the 'non-English language background' population of the United States (NCES 1976). The correlation between the number of foreign-born non-English language background children aged 6-18 in the various states and the total number of ethnic community mother tongue schools, state by state, is no more than .07. On the other hand, the correlation between the number of native-born non-English language background children aged 6-18 in the various states and the total number of ethnic community mother tongue schools, state by state, is .63. Obviously, then, we are dealing with a community pattern that is aimed primarily at American-born children. However, it is not only a child-centered community pattern. The correlation between the total number of non-English language background persons (adults and children) and the total number of ethnic community mother tongue schools, state by state, is fully .80. Thus, we are dealing with an intergenerational phenomenon in addition to an inter-nativity one. Ethnic community mother tongue schools typically serve second, third, and even fourth generation American-born children. They are most common among those groups which have had ample experience in 'working out' the American system. Such schools are now just beginning to grow among our Portuguese, Spanish, Filipino, Indochinese, and Native American populations, which have only recently begun to interact significantly with the American mainstream. Thus, the number of persons of Spanish language background in each state correlates only .58 with the number of Hispanic ethnic community mother tongue schools, state by state. On the other hand, the number of persons of German language background in each state correlates .74 with the number of German ethnic community mother tongue schools, state by state. Once again we see that the ethnic community mother tongue school is an accommodation to American interactive reality. In a sense, and particularly so in recent years, Americans with ethnic mother tongue backgrounds are exactly that, i.e. both of those things simultaneously, and their ethnic community mother tongue schools enable them all the more to express and to integrate these two aspects of their identity.

Biculturalism under local community auspices. Ethnic community mother tongue schools in the United States are reflections not of foreignness nor of hostility to the American Anglo
'mainstream', but of a wish and need to enrich that stream with a more personally meaningful perspective, with a more communally authentic dimension. While the actual accomplishments of these schools are often far from dazzling or dramatic (as is the case too for most of the far better funded public schools of our country), these schools are maintained for extra-academic reasons as much as, if not more than, for academic ones. A great deal of community effort, emotion, dedication, and inter-generational heightened experience goes into the organization and maintenance of these schools. They are authentic channels of biculturism, of voluntary Americanism, and of American voluntarism rather that of diethnia or dinomia (Saville-Troike 1978, Fishman 1980b) under local neighborhood or community control. They represent contributions to cultural growth and creativity, and to controlled translinguification and transethnification of considerable vintage and of no mean value on the American scene. They are eminently worthy of study, respect, and assistance.

NOTES

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1. My greatest gaps are currently with respect to ethnic community schools employing Arabic, Russian, Polish, Chinese (other than on the West Coast), and the various languages involved in Buddhist traditions. I would welcome assistance from academics and laymen knowledgeable about the community schools of these language groups and willing to help me enumerate them more fully.

2. The designation 'non-English language background' is a technical one and definitely does not imply non-English or limited English-speaking, or even non-English mother tongue. Its technical definition is as follows: 'Persons of any age whose usual or second household language is not English, or if 14 years of age, whose mother tongue is other than English, whether or not they usually speak English.'

3. Obviously, these two groups are not equally well reported (counted, located) by NCES or other census studies. Nevertheless, underreporting is primarily a phenomenon involving foreign-born Hispanics so that, all in all, the point I am making probably holds valid even for Hispanics. Their ethnic community mother tongue schools will increase as their mainstream-experience increases. The same can be expected in connection with Native Americans.
REFERENCES


Imagine walking into a classroom and overhearing students reciting lists of numbers. Other students are busy copying numbers, and still others are transforming lists—e.g. reciting them in reverse order—and so forth. Suppose then that someone resembling a teacher approaches and you ask, 'What are these students doing?' The person in authority responds, 'They are studying arithmetic. Some of them are preparing for an arithmetic test, and others are being tested.' Would you believe the teacher? Would you agree that reciting numbers is the same as studying arithmetic? Would you accept such practices as tests of arithmetic?

Now imagine a different scene. This time the students in the classroom are reciting phrases, sentences, requests, denials, apologies, and the like. In the first case we heard students saying things like, 'eight eight three one five seven three, five six two six three one seven two one', and so on. In this instance we hear, 'Is the secretary busy? Is the alphabet important? Is the doctor available?' There are also, of course, variations on these items. For instance, we also hear, 'The secretary is not busy. The alphabet is not important. The doctor is not available.' Another student is saying, 'The secretary is busy. The secretary was busy. The secretary used to be busy.' Of course, there are many other variations, and some of the students—apparently those who are more advanced—are also reading and writing the various utterance forms. Again you ask the teacher what the students are doing. He responds that they are studying language. Because the utterances are in English, he says it is English they are studying. But he is quick to point out that some of them are taking tests in English. The others are preparing themselves for the same tests.
Isn't it interesting that we are apt to regard the recitation of numbers as an extraordinarily ridiculous way to practice, or teach, or test arithmetic, while many language teachers regard the recitation of lists of utterances as a valid method of practicing, teaching, and testing language skill? Hardly anyone would agree that a detailed analysis of the sounds associated with numbers, or the syllable strings that constitute a given exemplar (consider the syllables of seven and eleven, for instance), are a very important part of the theory of numbers, yet many linguists and testing specialists give the very strong impression that the sounds and syllables of words are somehow a faithful reflection of the heart and soul of language. Most of us would be singularly unimpressed if the arithmetic teacher in the example given were to defend the recitation of a number like eight eight three one five seven three by pointing out that it is the sum of 'two two one four five zero and six six one zero one three'. We would probably remain unconvinced if the teacher pointed out that this number could be used to illustrate the null transformation by subtracting it from itself, or the unity transformation by dividing it by itself, or the identity transformation by multiplying it by one, and so forth. The mere fact that a great deal of arithmetic can be done with any number does not make repeated recitation of the number into an arithmetic curriculum or test. We see arithmetic as requiring something deeper than the mouthing of the surface forms of numbers—regardless of whether they are short or long.

Oddly, however, language educators are apt to defend the recitation or other manipulations of the surface forms of language more vigorously. They are apt to argue that merely mouthing words of a language is much closer to language use than the recitation of numbers is to arithmetic. Such mouthings are apt to be defended as the foundational method for practicing, teaching, or testing language skill. Nowadays, for instance, it is popular to teach students to apologize in many different ways. One is apt to hear students saying such things as, 'I'm sorry', 'I'm very sorry', 'Oh how stupid of me. I'm so very sorry'. And so on. The list of possible apologies is being explored these days with much the same fervor that linguists once had for phonemes, morphemes, and syntactic patterns. Although the latter have not completely lost their appeal to language curriculum writers and test specialists, they have in part given way to lists of larger units of speech—so-called 'speech acts' and the like. Where students used to learn to discriminate phonemes, they are now engaged in large measure in discriminating between degrees of politeness in refusing an invitation, denying an assertion, and so on. The level of analysis in the theories has been shifted to encompass broader stretches of speech, but the taxonomic listing approach still remains.
Creative pedagogues and theoreticians will defend the listing method by pointing out that you have to have building blocks before you can erect the imposing edifices of discourse. An old bromide still common is the statement that 'mechanical manipulation must precede communicative use', and many a classroom teacher will still insist that 'you have to know the elements before you can put them together in meaningful ways'. While the linguists and their proselytes are defending various lists, sublists, and inventories, the reading specialists are similarly defending a taxonomic approach to reading. Early on, readers are supposed to acquire a list of graphophonemic correspondences which is thinly camouflaged in such nonsensical discourse as, 'The man ran. Dan can fan the man. The ram ran.'

Or, the reading curriculum writer may appeal to a more transformational approach by using all possible permutations of a greeting or some other speech form in order to illustrate certain syntactic patterns while sticking with a limited repertoire of lexical items. In one primer, for instance, one encounters such forms as, 'Good morning, Bing. Good morning, Sandy. Good morning, Sun. Bing runs. Sandy runs. Bing and Sandy run. Bing chases Sandy. Sandy chases Bing.'

In the series in question there would be no reason for surprise over forms like, 'Bing and Sandy chase the sun. The sun chases Bing and Sandy.' Since Bing is a dog and Sandy is a cat, and since both of them behave in remarkably peculiar ways, there is no reason for the sun to behave normally.

Of course, the reading specialists and the linguists, most of whom consider themselves ever so much better than any number of speech therapists, will be quick to defend their methods of language instruction by pointing out that the apparently meaningless strings of disconnected phrases, sentences, or nonsensical discourses can all be used in meaningful ways. If, for example, Bing and Sandy were pilots in a supersonic aircraft, they might indeed chase the sun if they started out at dusk and travelled west. Or, they might be chased by the sun if they started at dawn and travelled in the same direction. There are even potential occasions when a silly question like, 'Is the alphabet important?' might be construed in a sensible way. It may require a severe exercise of the imagination to supply meaning to a very long list of unrelated words, phrases, sentences, or speech acts, but it can be done in much the same manner that we are able to associate arithmetic operations with any number or list of numbers. Unfortunately, by similar logic it would be possible to defend a list of articles of clothing and diet as a theory of culture. It would be possible to argue that exterior paint is equivalent to architecture and that everything worth knowing about truth and justice can be learned from a study of hair styles.

We might refer to the speech oriented approach to language learning, teaching and testing as the 'superficial theory', or the 'listing method'. It implies and presupposes that language
use is little more than the mouthing of utterances. It suggests that practice in mouthing utterances will produce skill in language use, and further, that this skill can be broken down into multiple lists or inventories of elements. The curriculum can then teach the lists of elements (phonemes, morphemes, words, phrases, syntactic patterns, speech acts, functions, notions, etc.) in various modalities (listening, speaking, reading, and writing, or receptive versus productive, or oral versus written) and the tests can assess the elements on the various lists in similarly differentiated modalities. If phoneme discrimination is really different from morpheme use (or 'function' use, as some might prefer to call it), then this should presumably be reflected in the curriculum and testing. If word knowledge is really different from knowledge of grammar, then this should similarly be reflected in the curriculum and in the tests. If reading and writing are really different in some fundamental sense from listening and speaking, then this too should be reflected in curriculum and tests. In fact, every valid distinction between the various inventories of elements, skills, and whatever else the grand inventory of inventories requires, should be embodied in some manner in the curriculum and in the tests. From the vantage point of the analytically inclined, especially those who fit into the category of what I have been calling 'linguisticians', all of this should be sounding more and more reasonable. (For a paradigm example of this approach in action, see the remarkable paper by Rosenbaum in this volume.) If we can make hundreds of distinctions, why settle for only a few dozen? If it is possible to make thousands, why settle for only hundreds? Why not be as explicit in our analysis as possible? Why not get right down to the very finest grained sort of analytical diagnostic teaching and testing that can possibly be done?

Indeed, what other approach is there? We certainly must teach the phonemes, the morphemes, the lexical items, the syntactic patterns, the speech acts, and no doubt many other inventories of elements as well. How can this be accomplished? All of these inventories of elements must be tested too. How can this be done? How can we be certain that we are covering the necessary elements and representing them in reasonable proportions on our tests and in our curricula? I believe that what we require is an approach that is radically at odds with the traditional analytical method--what we called above the 'superficial method'. I believe that sound theoretical consideration would lead us to conclude that language is deeper than speech. The essence of language is deeper than the modality of processing. The heart and soul of language are not to be found in its surface form or its outward manifestations any more than the true personality of an individual can be gauged by an examination of skin, hair color, or clothing. The identity of a person is not to be found in the clothing that he wears. Neither is the essence of language to be found in the
surface form of utterances. A person may change clothes and remain the same individual—in fact, a person who refused to ever change clothes might be considered to have lost his senses and the most important part of his identity in the process. In the same way surface manifestation may change and the essence of language use may remain the same. We may speak of an event, or listen to talk about it, or read about or write about it without altering the content of the discourse. We may speak briefly or extensively without changing the nature of what is talked about or the essence of the message communicated. Surface form is important only as a slave to meaning. Otherwise, it is quite insignificant—literally without significance. It matters very little whether a message is received over the telephone, while sitting at home in one's living room, at the office, riding on a bus, or in a letter, by telegram, orally, or written; what matters is the meaning of the message as it relates to the stream of experience. What is it about? Who is it from? Why was it sent? What were the antecedent conversations or previous interactions to which it relates? What consequences are likely to follow from it? In short, what does it mean?

The mind naturally recoils at the suggestion that recitation of numbers is a valid method of learning, teaching, or testing arithmetic. Our reaction to the recitation of lists of disjointed, unrelated, meaningless drivel in language classrooms should be no less intense. As Piaget (1947) pointed out concerning arithmetic, in his excellent treatise on human intelligence, reciting correct answers is not the same as solving the problems. In the same way, acts such as mouthing utterances, or putting them down on paper, or converting marks on paper into utterance forms, do not constitute language use. Even if long lists of phonemic contrasts, morphemic manipulations, syntactic patterns, and speech acts could be efficiently internalized, they would no more resemble normal language use than long lists of numbers would resemble common uses of arithmetic. Lists simply do not have the precedents, presuppositions, implications, consequences, truth-value, and meanings that are characteristic of the fabric of normal communication. Normal language use is deeper, wider, richer, and more meaningful in every sense of the term than lists of surface elements, no matter how broad their scope. We can see immediately that lists of phonemes, morphemes, words, phrases, and sentences are less meaningful than typical discourse, but it takes a little more insight to see that the same must be said of lists of multiple ways to apologize, or take one's leave, or make a request, etc. Therefore, wouldn't it make good theoretical sense to concentrate on meaningful language use in all aspects of testing and assessment as well as curriculum design and instruction? Why use meaningless disconnected lists of any sort of surface structures?

It appears that a very strong argument can be offered from a purely theoretical point of view in favor of meaningful
discourse and against meaningless lists of surface forms. However, some will want to argue that careful research into first and second language acquisition will not support the use of meaningful discourse from the first stages of language learning and teaching. They will contend that it is necessary to begin with meaningless elements and later make a transition to discourse. After all, isn't this the way children operate in learning their first language? Surprisingly, as far as the surface oriented theories are concerned, children even in the earliest stages of babbling do not apparently attend exclusively to surface form. Even the cry of the neonate is filled with presuppositional meaning and implication. For one thing, there is the presupposition that mother will respond. There is the moral implication of an obligation to do so. Some adults deny this implication, but that does not erase the fact that such an implication exists and demands attention on the part of adult society. The point here, however, is not to make a case for any particular presupposition or implication, but to argue that the earliest communications of infants have propositional significances and values.

Unlike the meaningless sentences of so many educational exercises in language classrooms and elsewhere, the utterances of infants have pragmatic connections to the events of experience. They are not like the meaningless transformations of so many language classrooms these days, where students say things like, 'John is a boy. Is John a boy? John is not a boy? John is a boy, isn't he? John isn't a boy, is he?'; where it makes no difference whether John even exists and if he does exist, he cannot meet all of the requirements of the utterances about him. Contrast the typical curricular nonsense with the sorts of things that young children actually say or with the sorts of things that constitute normal discourse, and an enormous difference is soon apparent. Walker (of Hart, Walker, and Gray 1977, and other publications) has observed that the actual speech of children before five years of age bears a closer resemblance to the prose found in newspapers and periodicals for the home than it does to the language used in readers for the primary grades. Similar criticisms could be levelled at much of the material used for second language instruction worldwide, but especially in so-called foreign language classrooms. A great deal of what the student is exposed to simply lacks any pragmatic motivation. Compare sentences like, 'The alphabet is important. The doctor is available. The soup is ready.' with the sort of things a three-year-old is apt to say.

Take a couple of homely examples. One of my little nieces recently astounded her Uncle Rico with the following remarks. It seems she was quarrelling with her seven-year-old brother and had passed well beyond the bounds of reason. When the hulk—otherwise known as Rico—intervened, she defended herself with the remark, 'I wad jus' twying to assewt my wiw,
Unca Wico.' On another occasion, in a similar discussion with her eight-year-old sister, Cori, the same three-year-old asserted, 'But Cowi, my heawt is in the wight pwace.' Or consider one further example from seven-year-old Evan. First, it is necessary to understand that he is the sort of kid who wears glasses, is small for his age, and enjoys reading more than football. He told his grandmother after a romp in the cow pasture one day, 'You know, Grandma, it sure makes ya feel good to be able to scare something as powerful as a cow!'

Perhaps the most important aspect of real utterances generated in normal discourse is that they are temporally related to experience. They presuppose certain meaningful antecedents and imply certain meaningful consequences. In a question like, 'Is the alphabet important?', we haven't a ghost of a notion what alphabet is being discussed because the existence of any particular alphabet was quite irrelevant to the author of the widely used English series from which this example comes. On the other hand, when Evan says it made him feel good to scare a cow, he has a particular experience in mind. He is fully cognizant of the fact that his own forty-odd pounds is hardly a match for the ponderous weight of a Hereford heifer. There is a big difference between saying something that has some true connection to experience and merely mouthing words that are not relatable to experience in any determinate way (especially if you are not already a native speaker of the language in question). Even the presuppositions and implications of the utterances of genuine discourse can be said to have truth value. This sort of meaning not only does not, but cannot exist when the utterances in question are not and never have been associated with any particular meaningful experience. For instance, what presuppositions and implications can be drawn from a list of statements which are immediately followed by their negative transforms? Or by questions to which the answers have already been given? Under what sort of conceivable circumstances can alphabets be important, doctors available, secretaries busy, soup ready, John correct, and so forth? Before you arrive at page two, the curriculum becomes impossible to visualize in a meaningful frame of experience.

There are remarkable properties in discourse that are not to be found in surface forms cut loose from their moorings in experience. Consider another example. This one comes from a talk at the University of New Mexico given by William Labov some time ago. Probably the details of the story have been changed somewhat, but this is itself instructive of the structure and nature of discourse. It seems that Labov asked a certain longshoreman up in Maine to tell him about some incident where the fellow had nearly been shaded out of the picture. The man proceeded to relate an incident in a bar. He and his friends were seated at a table when another man and a woman entered. As well as I can remember, the story told in the words of the longshoreman went roughly as follows.
'So this woman, she was comin' on to me. She smiles at me and I smile back. But this fella she was with, he didn't like it, and he comes over to me kinda threatin' like. Me, I wasn't worried. My friends was all there. So I reached out and give him a little shove. Next thing I know, I'm lookin' up at the ceiling, and this friend, he's bendin' over me sayin', "Don't move your head. Your throat's been cut". Labov said that he had video-taped audiences where he told this story and when he gets to the part about the throat, nary a head moves. It seems that people get into the story to the point that they can practically feel the warm red liquid running down their own necks.

Perhaps the most salient feature of the discourse in question is its progressive movement. There is a meaningful sequence from one point to the next. Because of this connectedness, it is possible to make inferences regarding things that are not stated overtly in the discourse. For instance, we know that the man who cut the longshoreman's throat was the same one he reached out to push away. Further, we may have some very vivid impressions about the look and smell of the bar-room, even though no description of it was offered. We may assume that the man whose throat was cut was shortly taken to a hospital and patched up. We know in any case that he lived to tell the tale. Because of what we know about the work of longshoremen, we may infer a great deal about the look and manner of the man who was injured and the friend who told him not to move his head. We may also infer that the man who was handy with the blade probably didn't look too imposing, and a great deal else. In fact, a vast depth of knowledge can be brought to bear on the interpretation of a discourse that relates to genuine experience—a repertoire that is utterly useless when it comes to lists of disconnected, unrelated strings of sentences, apologies, or whatever.

We can also do certain things with discourse that it is impossible to do with nonsense. For instance, we can summarize it, e.g. a longshoreman told Labov about an occasion where he was nearly killed. We can expand it, as we were doing above. We can understand talk about it, participate in talk about it, read about it, or write about it. We can answer questions about it, and dramatize the events of the discourse. And, of course, we have not yet begun to exhaust the possibilities—we have scarcely scratched the surface. Yet in all of this we have already gone far beyond what could be done with nonsense. Consider the fact that there is no logical answer to a question out of the blue such as, 'Is the alphabet important?' or 'Is the doctor available?', while questions like, 'Why wasn't the longshoreman worried?' suggest a host of genuine possibilities.

The difference is that the utterances of real discourse are related to experience in meaningful ways, whereas nonsense is not. To cut utterances loose from experience is to destroy the better part of the linguistic enterprise. It is similar to
cutting the answers to arithmetic problems loose from the problems. A list of answers is relatively meaningless apart from the problems and the computations that led to them. Similarly, a list of sentences is by itself meaningless. On the other hand, if the sentences are meaningfully related to experience in known ways, they acquire properties that speech alone does not have. Understanding discourse must be viewed as a process of relating utterances to experience. There is no such thing as understanding utterances in isolation from experience. What little meaning can be associated with inanities like, 'Is the alphabet important?' has to do with what we know about alphabets and what it is for something to be important. Producing discourse, or participating in it, is also a process of relating utterances or surrogates of them to experience. The principal thing in all of the mental activity is not the surface form of speech, but the propositional logic, the meaning that motivates speech (or signing or whatever other manifestation language assumes) and endows it with significance.

The die-hard discrete point teacher and tester will assert at this point that we still must attend to features, phonemes, morphemes, lexicon, surface syntax, and all the rest. This is true, but does it not make a great deal of sense to do so within the context of meaningful discourse rather than lists of meaningless utterances? Instead of having learners (or examinees) merely mouth or write down representations of mouthings of utterances, would it not make good theoretical sense to have them work with texts where every utterance is tied to a meaningful experience in a discoverable way? For instance, consider the difference between the assertion, The man got his throat cut, versus The secretary is not busy. In the first case, there is an event or a factual state of affairs which is referred to; in the other, there is neither secretary nor business, nor the lack of it. What I am saying is that it makes no sense to practice using nonsensical utterance forms when the possible connections to experience are only obscured by the nature of the exercise. All of the elements of speech have their being and their true significance in genuine acts of communication, whether it be mere phatic communion or content oriented interaction. All of them can be taught and tested within the context of discourse. Further, there are excellent reasons to suppose that this can be done far more efficiently if discourse is used, and there is no reason to suppose that it can be accomplished at all with the surface oriented methods of discrete point practitioners.

What I am leading up to is the inferential conclusion that there are good reasons to suppose that the ability to comprehend and produce discourse in a language may be a relatively indivisible faculty. Consider in this regard where the ability to discriminate phonemes comes into play in interpreting the text about the longshoreman. What about the ability to use
functors? morpheme knowledge in general? syntactic skill? sociolinguistic competence? pragmatic competence? intelligence? What about listening comprehension? speaking ability? reading ability? writing ability? Isn't it at least possible that the mental operations necessary to the interpretation of discourse or its production may be relatively unitary in nature and far deeper and more important than the superficial modality of processing or the analytical categories associated with the surface forms of speech? On this score, we know that certain meanings which surface in one language in word order or in morphology, may appear in another in the lexicon or in the paralinguistic domain. It seems plausible at least to suggest that we might expect to find a powerful language factor that is deeper than speech and which is largely impervious to changes in processing modality. This proposal is not new (see Oiler 1977; Oiler and Perkins 1978, 1980; and Oiler 1979), but it has not been received everywhere with unbridled enthusiasm.

Many theorists (see Cummins, this volume, and his references) expect to find multiple factors of language proficiency. For years it was supposed that there would be clearly distinct variances associated with the traditionally posited components of phonology, lexicon, and grammar (to name only three), and the traditionally recognized skills of listening, speaking, reading, and writing. More recently, Cummins, for one, has proposed a distinction between what he sees as a general factor of ability to comprehend and participate in academic discourse and another general factor of communicative competence which would extend beyond the academic context. The latter he believes to be common to all normal human beings, whereas the former is cultivated and learned. Swain and Canale, on the other hand, see communicative competence as divisible into multiple subcomponents. Their model is too elaborate to go into in any detail, but it calls for separable components of sociolinguistic and pragmatic competence, each of which is also distinct (in the model) from linguistic competence. Many other theories could be mentioned in this regard, but ultimately we must get beyond the hunches, opinions, and theories, and attempt to determine by appropriate empirical methods what the facts are. It seems to me rather appalling that so many people in our field are willing to decide the nature of language proficiency by a poll of the experts instead of by appeal to empirical findings. Altogether too many papers on this and related topics simply end up by offering a kind of smorgasbord of opinions which are about as relevant to the issues as opinions on the value of pi are to mathematics.

What then does the research show? At present there seem to be two live options. Either a single general factor of language proficiency exists which exhausts all of the reliable variance in all sorts of language processing tasks, or a general
factor exists which exhausts most of the reliable variance in all of the tests that have been studied. The claim that multiple unrelated components exist has long since been ruled out. The important remaining question is whether there is any specific variance (i.e. variance that is unique and reliable) which is associated with particular modalities of processing or with particular components of proficiency. The empirical problem can be viewed as one of correlation. If tests aimed at a certain construct (e.g. skill or component) are correlated with each other and with tests aimed at some distinct construct (or constructs), the correlations of tests aimed at the same construct should exceed the correlations of tests aimed at different constructs. That is, arithmetic tests should correlate more strongly with each other than with reading tests, and so forth for all possible constructs. On the other hand, if the reading tests and the arithmetic tests correlate as strongly across categories as within, we must assume that there is something wrong either with the tests or with the theories of the constructs the tests are supposed to be measuring. There are many complications of this theme of test validation, but all of them rely ultimately on the basic statistical method of correlation. Methods of multiple regression, principal components analysis, classical factoring, and many other complications may be employed, but ultimately the requirement is still the same: tests aimed at the same construct should correlate more strongly with each other than tests aimed at different constructs (other things being equal).

Are there multiple factors of language proficiency? Is language proficiency clearly distinct from what has been called nonverbal proficiency? Educators and language testers have almost universally assumed positive answers to both of these questions and to many similar questions. Unfortunately, the research has not universally borne out these assumptions. In fact, it has nearly universally disputed them. Regarding the possibility of multiple factors of language proficiency, we might expect to find some variance in listening and speaking tasks that will not be present in reading and writing tasks. The research shows to the contrary that the major part of the variance in listening and speaking tasks is also present in reading and writing tasks and vice versa. For instance, see the papers by Oiler and Hinoftotis, Scholz et al., Hisama, Hendricks et al., and Kaczmarek in Oiler and Perkins (1980). The empirical findings consistently support the argument for a rather unitary general factor which exhausting nearly all of the reliable variance in all of the tasks so far investigated. Regarding the possibility of distinguishing language proficiency from 'nonverbal' intelligence, see the paper with Chesarek in Streiff and Oiler (in press). Also see the paper by Flahive in Oiler and Perkins (1980). Again the results show rather clearly that nonverbal intelligence tasks generate variances that are largely coincident with the variances generated by
so-called 'verbal' tasks. One of the types of tests often associated with a 'nonverbal' factor, at least in theory, is the sort of arithmetic test found in the California Achievement Test battery. However, Streiff showed recently in a replication of an earlier study in northern Arizona that even the computation score on the CAT battery was nearly perfectly correlated (within the limits of its reliability) with a general factor of language proficiency. A cloze test in a written format correlated with that factor at .95, while the computation subscore from the CAT correlated with the same factor at .90 (see Streiff and Oiler in press).

Examples already available in the testing literature could be cited much more extensively. However, rather than refer to a much longer list of previously published studies, it may be useful to turn to a consideration of research recently completed at Resource Development Institute in Austin, Texas. An extensive description of the testing done and the motivation for it is available from RDI (Scott 1979), so the tests and populations sampled are described only briefly here. In the third field trial, a sample of 573 subjects were tested. All were adults who were potential recipients of social services provided in one form or another by the United States Department of Health, Education, and Welfare. More than four-fifths of the examinees tested were from a minority background where the primary language was Spanish, Vietnamese, Chinese, or a Native American language. The rest were native speakers of English, but from socioeconomic levels roughly comparable to those of the subjects from non-English, minority backgrounds. The purpose of the RDI project was to devise an English language test that would discriminate well between natives and nonnatives and that would serve to help calibrate the various points on the scale of responses to the language question on the 1980 U.S. Census. More specifically, the government wanted to know the meaning of points on the language scale in relation to social services provided by DHEW. For instance, if a person says he does not speak English very well (i.e. answers 'not very well' to the Census question, 'How well do you speak English?'), what is the likelihood that such a person would be denied benefits normally provided by DHEW agencies?

By the time the third field trial came around, RDI staff had narrowed their battery of tests to a total of 80 items. Early in the discussions they had decided to opt for pragmatic tests rather than discrete point tests, but an attempt was made nonetheless to differentiate four categories of language processing tasks. First, there were two tests where the difficulty was focused almost entirely in listening comprehension. One of these was a task that required examinees to respond to certain imperatives, and the other required them to indicate whether two statements had the same or different meanings. Second, there were two tasks that required listening and speaking--a repetition task and a question-answer task. Third, there were
two tasks requiring reading comprehension--a multiple choice reading test and a multiple choice cloze test. Fourth, there were two tasks which required both reading and writing--a questionnaire in a written format, and a standard cloze test. In each case items were related to a sequential text wherever possible and in all cases there were multiple instances of cross-clause discourse level constraints which limited the range of possible responses. As a validity check, four additional scores were obtained. A trained linguist interviewed each subject and assigned a rating of speaking ability on a Likert-type scale. Subjects were also asked to rate their own abilities in speaking, reading, and writing on similar scales. Since there were multiple measures aimed at a plurality of possible constructs, one might expect the various scores to sort out into several factors. For example, there might be separate factors of oracy and literacy, or of receptive versus productive skills, and the like.

To test the possibility that a single general factor might explain the lion's share of variance in all 12 scores, a principal components analysis was run with unities on the diagonal of the 12 x 12 correlation matrix. The results of this analysis are given in Table 1.

Table 1. A principal components analysis over 12 English language proficiency tests (N = 573).

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<td>Imperatives</td>
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<td>Paraphrase recognition</td>
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<td>Repetition</td>
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<tr>
<td>Oral question and answer</td>
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<td>.62</td>
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<tr>
<td>Multiple choice reading</td>
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<td>Multiple choice cloze</td>
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<td>Written questionnaire</td>
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<tr>
<td>Standard cloze</td>
<td>.90</td>
<td>.81</td>
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<tr>
<td>Expert rating of speaking</td>
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<tr>
<td>Self rating of speaking</td>
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<td>.68</td>
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<tr>
<td>Self rating of reading</td>
<td>.81</td>
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<tr>
<td>Self rating of writing</td>
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A single general factor accounts for the vast majority of reliable variance in every single test. There can be little doubt that there exists a large and powerful language factor underlying performance on all of the diverse tasks employed. There is no evidence that the constructs of receptive versus productive skill, or oracy versus literacy, can be distinguished. To a very great extent we may say that all of the tests are measuring the same thing. It is doubtful, in fact, that any subset is measuring anything that some other subset cannot measure. On the average, 75 percent of the total variance
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generated by each test is attributable to a single general factor. The smallest amount of variance shared with that factor by any test was 62 percent and the largest was 85 percent.

Critics might argue that the results just reported are due to the rather wide range of variability in skills of the tested subjects. They might very well contend that if the range of variability were restricted, the general factor would dissipate and multiple uncorrelated factors would remain. Because of the fact that the original raw data was not available for further analysis, it was not possible to refute the just mentioned criticism directly with the RDI data. However, many studies with multiple measures of language proficiency have been done with more restricted ranges of proficiency in the subjects tested. (See the studies I have cited from Oller and Perkins 1980, for instance.) Nevertheless, to show that the hypothetical criticism just posed is, in fact, not generally correct, I consider here one further study by Caulfield and Smith (in press). They used a highly restricted range of proficiencies by taking a sample of Spanish students at the secondary level. Since all 28 of their subjects were drawn from a single class at the advanced intermediate level, there is no reason to suppose that the variability of the sample was in any way artificially inflated. To the contrary, one might well argue that it was, in fact, artificially depressed.

Caulfield and Smith used seven tests: a standard cloze test, a Spolsky type noise test, the four subscores in listening, speaking, reading, and writing from the Modern Language Association tests, and an oral interview. A principal components analysis of their 7 x 7 correlation matrix with unities on the diagonal is given in Table 2.

Table 2. A principal components analysis over seven foreign language proficiency tests for a sample of subjects with a restricted range of proficiencies (N = 28).

<table>
<thead>
<tr>
<th>Tests</th>
<th>Loadings on g</th>
<th>h²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cloze test</td>
<td>.92</td>
<td>.85</td>
</tr>
<tr>
<td>Noise test</td>
<td>.94</td>
<td>.89</td>
</tr>
<tr>
<td>MLA listening</td>
<td>.81</td>
<td>.66</td>
</tr>
<tr>
<td>MLA speaking</td>
<td>.90</td>
<td>.80</td>
</tr>
<tr>
<td>MLA reading</td>
<td>.90</td>
<td>.80</td>
</tr>
<tr>
<td>MLA writing</td>
<td>.95</td>
<td>.90</td>
</tr>
<tr>
<td>Oral interview</td>
<td>.86</td>
<td>.75</td>
</tr>
</tbody>
</table>

Again the results clearly sustain the hypothesis that there is indeed a very large and powerful factor of language proficiency which underlies all of the tests. On the average, 81 percent of the total variance in the input test scores is attributable to a single factor. The smallest amount of variance that any test shared with that factor was 66 percent and the largest amount
was 90 percent. The picture is not very different here from the case of the more varied population of ESL/EFL subjects. There is again no evidence of separable factors associable with distinct constructs.

Allowing the possibility that it may still be possible later on to show small amounts of reliable variance attributable to separable constructs, is there anything now that can be recommended to practitioners in language education, especially bilingual education? Laying aside the controversies concerning the small amounts of reliable variance in language tests and in other educational and psychological tests still to be accounted for, some practical recommendations can be made based on present findings. For one, we should be generally aware of the fact that there is a language factor deeper than speech which pervades every kind of educational or psychological test that has been investigated so far (and this includes a surprisingly large and diverse array of tests). We should steadfastly resist the authoritarian or democratic elitist approaches to test design that appeal to the opinions of well-known personages in the profession. We must insist on the application of appropriate empirical tests to the tests themselves. No amount of expert eye-balling and no magic number of meetings with advisory committees (no matter how impressive their credentials nor how fluent they may be in multiculturalism and test jargon) will supplant the need for careful empirical research. At the moment, the following recommendations seem to be well supported by the requisite type of research: (1) Tests should be based as much as possible on meaningful language processing tasks under normal temporal constraints. (2) Discourse appears to be a better basis for test material, in general, than are lists of utterance elements (including those at the level of speech acts). (3) Deep language proficiency appears to pervade all sorts of educational and psychological tasks to such an extent that it is doubtful whether traditional psychological tests should be employed for the types of diagnosis often implicit in their labels. (4) Educators should recognize that all sorts of tests aimed at a tremendous diversity of constructs may be measures of language proficiency more than anything else and should interpret scores accordingly. (5) Finally, educators in all areas should recognize that normative language proficiency may be about all that we can measure with the degree of accuracy that curricular efforts demand. Therefore, we should probably do everything possible to improve deep level language competence across the entire curriculum and we should evaluate our success with appropriate language tests.

NOTES

1. These examples come from a reader by Rasmussen and Goldberg (1970), published by Science Research Associates.
The book begins with a list of isolated words and follows them by a nonsense story. There are colorful pictures, but they are not pictures of anything—merely meaningless patterns. Presumably, this keeps them in perfect harmony with the nonsense sequences of sentences which are just about as meaningful throughout as the ones cited here.

2. These sample sentences are a rough similitude of the Sun Up materials by Early, Cooper, Santeusanio, and Adell (1974) published by Harcourt, Brace, and Jovanovich. They are supposed to represent the sort of thing that will 'delight young readers' (p. xv). The book is filled with other examples which present the world of children as so different from that of adults as to be nearly unrecognizable as genuine. Of course, the authors maintain that it is a world that children understand and greatly enjoy. The talk of children, on the other hand, belies this (Hart, Walker, and Gray 1977).

3. This particular example comes from a talk by Stephen Krashen at SPEAQ in Quebec City, Canada, 1978.

4. This model was discussed at sessions on language testing organized by Adrian Palmer, Lyle Bachman, and Peter Groot at the 1979 and 1980 TESOL Conventions in Boston and San Francisco, respectively. It is one of the most elaborate and eclectic models yet to be offered. At present, efforts are underway primarily by Palmer and Bachman (and no doubt the OISE researchers as well) to put it to the test.

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THE DEVELOPMENT AND STRUCTURE
OF THE LANGUAGE SKILLS FRAMEWORK
OF THE STUDENT PLACEMENT SYSTEM
FOR BILINGUAL PROGRAMS

Harvey Rosenbaum
SwRL Educational Research and Development

This paper describes the current status of the Department of Education project for the Development of Entry/Exit Criteria and Associated Assessment Procedures for Bilingual Projects, sometimes referred to as the Entry/Exit project. After a brief introduction explaining the background of the project, there is a general overview of the complete product that was developed for the Department of Education. This product is called the Resources for Developing a Student Placement System for Bilingual Programs. The main focus of the paper is on the Language Skills Framework (LSF) that was developed as part of the Resources. The paper explains the approach and rationale used in the development of the LSF, and how the LSF fits into the total Resources. The language components, areas, and subareas of the LSF are described along with a few example language skills. There is also a section emphasizing some of the special features of the LSF, followed by a brief discussion of the next stages in the project.

Background. The initiating Request for Proposals for the Development of Entry/Exit criteria and Associated Assessment Procedures for Bilingual Projects called for two major elements: (1) a product to assist staff of bilingual education projects in implementing an assessment system appropriate for their needs; (2) a language skills framework (as part of (1)) that defines the 'ability to function in school in English' for kindergarten through sixth grade. The contractor was to 'operationalize each skill by either listing the associated items or specifying the rule or rules by which the appropriate class of items may be generated'. The purpose of the language skills framework
was to provide a clear and 'rational' foundation for determining language proficiency. A general constraint for the entire project was that it must utilize existing knowledge; it could not conduct new or primary research. In addition, while the resulting product was to contain specified procedures and criteria, these procedures and criteria were to be 'applicable to all bilingual education projects' and not tailored to any one category of projects, e.g. Spanish/English bilingual education projects. The overall purpose of the project was to improve the state-of-the-art as currently practiced by local education agencies.

The project was awarded to SWRL Educational Research and Development in September, 1978 by the U.S. Office of Education. The task called for by the contract was a complex and difficult one. In addition to the conditions imposed by the contract, one had to take into consideration the variability in situation, resources, and goals found at the local level as well as multiplicity of local, state, and federal regulations concerning bilingual projects. In developing the resulting product it was decided that the most desirable policy was one which was guided by the following two principles: (1) what makes schooling and instructional sense, given the particular educational situation; (2) what was the best long-term program for the development of the individual child.

The product. The purpose of the Student Placement System Resources is to assist Title VII projects in developing and implementing their own system(s) for selecting students for Title VII program participation, periodically reviewing students, determining when it is appropriate to transfer students to other instructional programs, and providing the necessary follow-up assistance to transferred students. In our view, placement is simply the process of assuring that a student is always assigned to the most appropriate instructional services relative to materials in the student's changing needs and capabilities. The primary Student Placement System (SPS) Resources consist of: (1) the Designers Manual, which contains detailed information and procedures for developing, installing, and operating the various parts of the system; (2) the Language Assessment Manual, which describes how the Language Skills Framework can be used as part of the process of selecting or constructing English language tests; (3) the Language Skills Framework (in three volumes), which provides a set of structured and precisely defined English language skills that can be used as an informed basis for selecting or constructing English language tests for kindergarten through sixth grade. The three volumes are: Volume 1, Oral Language; Volume 2, Reading; Volume 3, Writing.

The Designers Manual discusses the various elements and procedures that should be included in a placement system as well as the implementation of the system. The SPS Resources
make a distinction between identification, entry, reclassification, and exit. 'Identification' is the process of identifying that subgroup of students whose limited ability to speak, understand, read, or write English (as a result of their primary language being other than English) denies them the opportunity to learn in an all-English-medium classroom. 'Entry' is an initial placement decision to assign a student to one instructional program rather than another. 'Reclassification' is the result of determining that a student originally classified as limited-English-proficient can now be classified as English-proficient. 'Exit' is the decision to move a student out of a Title VII program into another program, e.g. bilingual (but not Title VII), all-English-medium, etc. The Designers Manual presents and discusses several different models that can be used for developing placement systems.

The Language Assessment Manual serves as an auxiliary manual to the Designers Manual. It presents a set of procedures for selecting and/or constructing English language tests for oral language (speaking and listening), reading, and writing. As part of these procedures it provides an introduction to the Language Skills Framework (contained in three volumes) and procedures for adapting the LSF in terms of skills and grade assignment of skills so that it is appropriate for local instructional practices and needs. This modified skills framework is termed a 'local' LSF. While the Language Skills Framework is an extensive organization of nearly 300 different skills with sample assessment items, it is not a test. It is part of the resources to be used for either language test selection or test construction.

There are four assumptions about local conditions and language testing that guided the development of the Language Assessment Manual. First, identification and reclassification should reflect the language requirements and instruction of the local community. For this reason we advocate the development of a local LSF and the use of local norms for tests. In some situations the local standards will be above the national norm and in other instances local standards will be below the national norm. However, if the intent, as it is in this contract, is to establish that the student can at least function in the local classroom, there is no alternative to determining the local norms. Specific exit decisions, however, could take into account the relation between local and national norms. The second assumption is that identification and reclassification are essentially defined over the same set of skills. It is important here to emphasize the word skills, not just scores on tests. When the language skills in locally normed tests are those skills found to be both acquired and necessary in a local classroom at a particular grade level, the same skills can be used for both identification and reclassification. In practice, however, we would expect that there would be differences in the mechanics and procedures of the actual testing between
identification and reclassification. For example, for the sake of efficiency, identification assessment could be organized on a stage testing basis. This would allow non-English-proficient students to be identified with a simple, brief screening test and not be tested on the more difficult skills.

Another assumption underlying the Language Assessment Manual is that a clear definition of each skill, augmented by sample assessment items is necessary, not only for developing tests but also for evaluating and selecting from existing tests. In this regard, the test selection approach seems to be a workable compromise, when it is clearly understood what the test(s) actually assess as compared to the local LSF. The fourth assumption is that many Title VII projects will not have all the staff experience and resources necessary for even the test selection option and will need outside help in the form of consultants from the private or public sector. Thus the manual serves as an information resource for local projects to make decisions about available options; it does not attempt to be a detailed manual that provides projects with the requisite knowledge and experience when they lack some of the necessary staff.

The relationship between the Language Assessment Manual and the Designers Manual is depicted in Figure 1. The Language Skills Framework which is organized in three volumes for the Student Placement System also appears as a five-volume report on the LSF itself. This report contains more detailed background material and references.

Developing the Language Skills Framework

The problem. The task of constructing a Language Skills Framework defining the ability to function in school in English from grades K to 6 is enormous in both scope and complexity. The enormity of scope derives from the purpose of the framework, as given in the initiating Request For Proposal (RFP), which was to 'define general proficiency in [the] English language at the elementary school level. Thus, the scope of the framework must include not only the obvious domains of listening and speaking but also the literacy domains of reading and writing. Taken together, these four domains provide a general definition of proficiency in the English language that is sufficient for the needs of bilingual programs.

The complexity of the task is a function of three basic factors that derive from the RFP. The first factor is the requirement that the Language Skills Framework be a set of skills organized on a plausible basis and not just a listing of relevant skills. As stated in the RFP, the framework defines 'the individual component skills and the interrelationships among these skills'. In this regard, the LSF differs from many language tests and minimal competency lists.
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Figure 1. Relationship of Language Assessment Manual to Designers Manual.

Designers Manual

- Project evaluates placement system requirements

  Decision to select or construct language tests

  Yes →

  Construct local language skills framework (sec. 2 and 3)

  Initial review of available tests (sec. 4)

  Decision to select language tests (sec. 4)

  Yes →

  Detailed content review of subset of tests (sec. 4)

  No →

  New test construction (sec. 5)

  Develop local norms for tests (sec. 6)

  Select one or more tests (sec. 4)

  Assemble components according to placement system design

Language Assessment Manual

No
The second factor is the requirement that the 'contractor ... operationalize each skill'. This operationalization requires an extensive amount of detail in terms of describing skills, providing sample assessment items, and describing the sample assessment items. The third factor is the requirement that the skills organized within the overall framework 'also be suborganized into seven separate frameworks which define for each grade (K through 6) general English language proficiency'. Thus, the task calls for one overall framework that covers K through sixth grade and seven grade-specific frameworks.

Several other factors added to the difficulty of the task and require acknowledgment and consideration. One important factor is that the ability to function in school in English successfully is dependent on many elements which are not included in the definition of general proficiency in the English language. Other crucial elements such as motivation, conceptual skills, and subject area or knowledge-based skills are also important for successfully functioning in school. While these elements are outside of the scope of the Language Skills Framework, they should be taken into consideration when making placement decisions and are discussed in the Designers Manual.

Examples of other specific questions which we had to consider involve the structure and skills content of the framework. For example:

- On what grounds can a set of skills covering listening through writing for the elementary school be established?
- Assuming a set of specified elementary school skills, what systematic basis can be used to establish appropriate grade levels for these skills?
- While some of the traditional speaking and listening skills such as vocabulary and oral presentations are recognized in language arts programs and/or language assessment instruments, there are many important skills that are not addressed. These are skills like understanding when you have been called on, knowing how to volunteer to answer a question, or understanding how to interpret the teacher's comment after you have answered the question. How are these necessary skills to be incorporated into a Language Skills Framework?

The approach. Given the scope and complexity of the skills framework, it seemed preferable to treat each domain initially (i.e. listening, speaking, reading, and writing) as a distinct task. This would ensure that the development of each domain would be responsive to the best of current knowledge and resources as well as the overall purpose of the framework.

The oral language component. The skills that are specified for the oral language component are drawn from the literature
and research on children's acquisition and development in the English language. In this regard, the studies of first language acquisition, rather than second language acquisition, served as our main source of skills. There are several reasons for reliance on studies of English as a first language. The most important reason is that the Language Skills Framework required a set of oral language skills that could be related on a grade basis to a level of competency that could be expected of native English-speaking children. While we clearly find variation in the rate of language development between individual children from the early stages to the later stages (see, for example, Brown 1973, Chomsky 1969), second language acquisition shows even greater variability. One obvious reason for this greater variability is that the second language learners are introduced to English as different ages.

The purpose of assessing listening and speaking skills is to determine if a student has sufficient receptive and productive command over spoken English and its uses to be able to function in an all-English-medium classroom at his appropriate grade level. Ideally, a major emphasis in this portion of the Skills Framework should be on the use of language as part of the classroom interaction process. Interaction skills such as understanding when you have been called on, understanding what you have been told to do, and knowing how to volunteer an answer or how to obtain clarification in an appropriate form, are not only indicators of proficiency with the language; they are part of proficiency. Interaction skills in conjunction with the ability to process extended discourse and, to a lesser degree, to produce it, seem likely to constitute the major functional elements for spoken language proficiency in the classroom.

However, the current literature on these language skills is neither extensive enough nor sufficiently detailed to enable us to describe clearly a set of skills which would be sufficient by themselves for determining language proficiency on a grade-specific basis (see Koehler 1979, Mehan 1979, John-Steiner et al. 1979, Sinclair and Coulthard 1975, Wiemann and Backlund 1980). Consequently, it was decided to use a semi-reductionist approach to oral language assessment: the assessment of functional skills or use skills combined with the assessment of language 'parts' skills. The traditional levels of language parts are phonology, vocabulary, and sentence structure or syntax. Each of these areas provides information about different aspects of language proficiency; but for the purposes of this project (e.g. 'ability to function in school in English', grade level assignment, skill specification), not all areas are equally useful. Of the three areas, vocabulary is probably the most sensitive indicator that we can currently use for making grade level evaluations across the entire kindergarten to sixth grade range. It was decided, nevertheless, to
include these three areas plus language use skills as the four areas of the oral language component.

Phonology is the least useful of the oral language areas in terms of providing information for making grade level discriminations. Studies show that most of the phonological development of native English-speaking children is completed by around kindergarten age (Templin 1957, Cairns and Williams 1972). Consequently, the level of phonological development found in most native-speaking kindergarten children is adequate for elementary school communication. It does not follow, however, that there is no value in assessing phonological skills. For example, if a student's English pronunciation interferes with his ability to communicate and if there is reason to document this objectively, phonological assessment is appropriate.

As for the sentence structure (or syntax) area, it is clear from the language acquisition literature (e.g. Chomsky 1969, O'Donnell et al. 1967, Rosenbaum 1975) that children are still in the process of developing productive and receptive control over English syntax during the elementary school period. Unfortunately, there are no cross-grade investigations of the levels of syntax that classroom activities require of children. For example, there have been no investigations of syntax used by first and fourth grade teachers to see if there are differences in complexity and difficulty across grades.

Therefore, while it is possible to establish a set of syntactic skills that are acquired by children during the elementary school period, it is not possible to map specific subsets of these skills to specific grade levels with the claim that they are necessary for functioning in those classrooms. Currently, these syntactic skills should be viewed as maximum criteria: nonnative English-speaking children who are proficient in these sentence structure skills are doing as well as native English-speaking children.

The development of the sentence structure skills and the relevant language acquisition literature is discussed in the oral language volume of the LSF. A detailed review of the literature from which these skills are drawn can be found in Russell (1979). The initial screening of the acquisition literature resulted in a pool of 126 skills as candidates for the sentence structure skills. Forty-six of these skills were eventually included in the Language Skills Framework. This smaller set of skills was established as a result of several considerations: practical testability, number of skills assigned to a grade level, and overall importance as a classroom language skill. The testability consideration played a major role; we were not able to devise practical assessment items for many of these skills. In addition, the initial levels, particularly beginning kindergarten, kindergarten, and first grade, contained a high proportion of the skills. Consequently, some skills that would
appear to have less functional importance in the classroom were dropped.

The purpose of the oral vocabulary area is to provide a set of vocabulary words for each grade (K-6) that can be used to determine whether a student has a vocabulary of sufficient scope and depth to be able to function in an all-English-medium classroom. Vocabulary is a critical area in determining the student's level of language proficiency since it can be a very sensitive indicator of the student's range of experience and use with the English language. The specific vocabulary provided for this area was drawn from the SWRL General Lexicon (Rhode and Cronnell 1977). This is a graded (K-6) lexicon of over 10,000 words developed by drawing on over a dozen studies of the oral and written vocabularies produced by elementary school children, as well as the vocabulary found in several types of printed materials used by upper elementary school children. Figure 2 indicates the major sources for the General Lexicon.

A validation study (Rhode 1976) was performed on a 10 percent sample of the General Lexicon. The conclusions were: (1) 87 percent of the words are known by most children by or before the grade level designated in the lexicon, and (2) 95 percent of the words represent vocabulary clearly known by children in grades 1 to 6. However, one possible constraint on the General Lexicon should be noted. There is no separate identification in the General Lexicon between children's productive vocabulary and the vocabularies found in the written materials that children use. If the vocabulary in written materials is more difficult than that produced by students or spoken by teachers to students, the net effect is that the overall vocabulary for grades 4 to 6 may be more difficult than need be for the purpose of making oral language evaluations.

The language use area provides a set of skills which is directly involved in the use of language for specific communicative purposes. In determining whether a nonnative English-speaking student has sufficient proficiency to function in an all-English-medium class, the ultimate criterion is whether she/he can use English as an effective channel of communication, both productively and receptively. A student may be able to demonstrate reasonable proficiency in the three preceding areas (phonology, vocabulary, and sentence structure) and still not be able to use English as an effective channel of communication in the classroom (see Hymes 1972, Ervin-Tripp 1972, Bauman and Sherzer 1974). For example, the English language and culture, particularly the rules and procedures of the classroom, may be so different from what a student is used to that she/he will find it difficult to understand and participate in a classroom activity (see, for example, Phillips 1972).

The language use area is divided into two subareas: classroom directives and classroom interaction. These two types of language use skills are included in the Language Skills
**Figure 2. Major General Lexicon sources.**

<table>
<thead>
<tr>
<th>Study</th>
<th>Description of words</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kolson (1960)</td>
<td>About 900,000 running words of kindergarten children's free speech at home and at school, plus some elicited speech</td>
<td>Nearly 500 children drawn from 3 separate urban areas</td>
</tr>
<tr>
<td>Murphy et al. (1957)</td>
<td>About 370,000 running words of kindergarten to third grade children's speech in the classroom</td>
<td>Sampling of 14 classrooms, mainly in New England</td>
</tr>
<tr>
<td>Weaver (1955)</td>
<td>About 121,000 running words taken during kindergarten classroom activities</td>
<td>Kindergarten classrooms in rural northwest Los Angeles county</td>
</tr>
<tr>
<td>Entwistle (1966)</td>
<td>12,000 elicited word-association responses from kindergarten children</td>
<td>200 children in Baltimore</td>
</tr>
<tr>
<td>Rinsland (1945)</td>
<td>Over 6,000,000 running words written by children in grades 1 to 8, with some first grade words from oral sources</td>
<td>Over 100,000 children in more than 700 schools</td>
</tr>
<tr>
<td>Jacobs (1967)</td>
<td>About 850,000 running words of written free-association words by students in grades 2 to 6</td>
<td>Over 8,000 students in Oregon</td>
</tr>
<tr>
<td>Durr (1970)</td>
<td>About 105,000 running words reduced to 3,220 different words, counting only the base forms</td>
<td>80 commonly used 'free reading' texts for primary children</td>
</tr>
<tr>
<td>Green, Howard, Joerger; and Marino (1958)</td>
<td>Words in fifth grade and sixth grade textbooks, including readers, social studies and science texts</td>
<td>20 fifth grade and 20 sixth grade texts</td>
</tr>
<tr>
<td>Rhode and Cronnell (1977)</td>
<td>322 new words generated by a new words study which included recognition by 60% of a student sample (kindergarten to sixth grade)</td>
<td></td>
</tr>
</tbody>
</table>
Framework because (1) they play a major communicative role in the classroom and (2) they can be precisely specified and systematically organized. There are other types of language use skills that can be important for determining whether a student is able to function in an English-medium classroom. For example, we have not included other types of speech acts, in addition to directives, nor a direct assessment of the student's ability to understand an extended discourse or to make an oral presentation. It would be advantageous to have included some of these kinds of skills in the oral language component. However, the current literature and research on these skills has not reached the point where it can provide the basis for establishing a suitable set of skills to LSF specifications.

The classroom directives skills focus on the student's ability to understand directives, regardless of the various forms that English directives can take. For example, the request for a pencil can be expressed as 'Give me the pencil! Do you mind if you give me the pencil?', etc. To a lesser degree, this subarea also assesses student's control over producing appropriate directives.

The specific directives assessed by this subarea are drawn from two main sources. The first source is the small body of empirical studies investigating the directives that children actually understand and produce (e.g. Ervin-Tripp 1976, Cook-Gumperz 1977, Shatz 1978). The Ervin-Tripp study, in particular, was the major source for four of the five categories of directives included in this subarea. The second source of directives was the literature on teacher's language, particularly the examples found in transcripts of classroom interaction studies (Green and Wallet 1978, Griffin et al. 1978, Johnson 1972).

The classroom interaction skills reference a set of classroom procedures that enable the student to interact appropriately with the teacher during classroom instruction. These procedures reflect (1) rules that students are expected to conform to and (2) patterns of teacher's language use. They include such activities as a student's being called on or the teacher's evaluation of student's response to the teacher's question. Proficiency in these activities represents an important segment of information for making entry and reclassification decisions.

The actual skills are drawn from the current literature on classroom interaction (e.g. Sinclair and Coulthard 1975, Mehan 1979, Griffin et al. 1978, Johnson 1972). They are structured by the basic three-part sequence originally used by Bellack et al. (1966): teacher's elicitation, student's response, teacher's evaluation. As part of the background information on these interaction skills, the Oral Language Volume contains a model and a detailed discussion of this interaction process. Examples of the skills drawn from classroom data are also provided.
The reading component. The development of the reading and writing components of the language skills framework was approached from a very different orientation than that of the oral language component. Reading and writing skills are acquired by students as a result of instruction by teachers using instructional materials. While undeniably there is variation from teacher to teacher and classroom to classroom, there is no question that the instructional materials form the basis of instruction and thus provide a foundation from which one can generalize to specific reading and writing skills for the elementary schools levels.

According to a study conducted by the Educational Products Information Exchange Institute (1976), investigators in on-site observations noted that 90 percent of what is done in classrooms can be attributed to commercially prepared materials; for the same study, teachers themselves reported that such materials generally accounted for 90 percent or more of their instructional time. Specification of the reading and writing skills for the LSF was primarily based on an empirical analysis of instructional materials currently in use. Some consideration was also given to other skill sources such as minimal competency standards, and skills proposed by language arts scholars. Each Title VII program may have to adjust these specifications to its own unique situation; nevertheless, such an approach is feasible and has been implemented for this project.

The reading component provides a good example of how the literacy skills were arrived at. The purpose of the framework for reading is to specify a set of reading skills that will enable us to define the different levels of reading ability appropriate for each grade. There are many approaches that one might select from; for example, reading could be approached as a psychological process involving certain cognitive and information processing skills (see Gibson and Levin 1975). A major difficulty with this approach is that our current understanding of these processes does not provide an operationalized set of grade-by-grade reading skills. In addition, the actual instruction is not organized and implemented in the classroom in terms of these psychological processes.

Consideration of the student's situation indicates that the fairest approach to developing a framework of reading skills is one which is based on what children are actually instructed in and evaluated on in the classroom. It was decided that the approach which provides the closest, systematic approximation to the specifics of classroom instruction and evaluation is one based on the content and skills in the major reading programs that are used in schools throughout the country.

However, reading programs are at best approximations to classroom instruction along two parameters. A school may include, as part of the regular reading instruction, certain skills that are not in its commercial reading programs because these skills are regarded as being important. On the other hand, a
school may not provide instruction in other skills found in the program because these skills are not regarded as important. Such differences in specific skill content or grade level assignment of specific skills can be adjusted for when a Title VII program develops its local LSF.

The set of grade-by-grade reading skills was arrived at through careful and detailed page-by-page analysis of reading materials, including reading texts, practice books, and worksheets. Reading programs analyzed for these skills are listed in Figure 3. As part of this procedure, each skill is coded so that in subsequent computer analyses skills can be grouped by major skill areas. The introduction and continued instruction of particular skills can then be compared across grade levels and across different programs. The distribution of reading skills across grades and programs is discussed in detail in Fiege-Kollmann (1979). Perkins (1979) presents a skill-by-grade analysis of several minimal competency lists. This general text analysis approach has been utilized at SWRL for several years in the development of large-scale information systems (Fiege-Kollmann 1976, 1977, and 1978; Buchanan and Milazzo 1977; and Fiege-Kollmann and Milazzo 1977).

Figure 3. Text series analyzed for reading component.


The writing component. The basic method used for developing the writing component was similar to that used for the reading component: analysis and specification of the actual writing skills taught by the writing programs that are used in classrooms. Consequently, the skills included in the writing component are those derived from careful and detailed page-by-page skills analysis of the texts, practice books, and worksheets found in several currently used writing programs. A list of the programs used in this analysis is given in Figure 4. The skills resulting from this analysis were systematically organized and compared with the writing skills proposed as minimal competency standards and the writing skills proposed by language arts scholars (Humes 1979, Lawlor 1979). A detailed discussion of how the writing skills were determined is also presented in Humes (1979).
Figure 4. Text series analyzed for writing component.

Spelling series:

Language arts series:

Comments. An early working orientation used in establishing skills for the three components was that the initial pool of skills should represent as comprehensive a set of skills as possible. Questions such as 'How could a skill be assessed?' or 'How many skills are too many?' were not taken into consideration in the early phase of developing the framework. Since the Language Skills Framework is not a test there was no need to be constrained—as test developers are—to initially proposing a limited number of testable skills.
One consequence of this initial orientation was that we were eventually faced with skills which seemed appropriate, but with...
no practical way to assess them. This occurred most often in the development of the oral language component. The discussion of the sentence structure skills described one such instance. The oral vocabulary area provides a particularly interesting example of this type of situation. The first step in developing this area involved the establishment of a graded vocabulary based on the SWRL General Lexicon. However, we then found that the vocabulary for second grade and beyond was too abstract for the assessment formats that could be used for testing the production of vocabulary. Most developers of oral language tests intended for bilingual populations deal with this problem by using a vocabulary drawn largely from the kindergarten level even for vocabulary tests proposed for the K-3 and K-6 range.

As part of the development of the oral vocabulary area, we compared the SWRL General Lexicon with the vocabulary used in 13 tests assessing the comprehension of oral vocabulary and six tests dealing with the production of oral vocabulary. With one exception, both comprehension and production tests used items which were clearly biased toward the kindergarten level. For example, the comparison of the SWRL General Lexicon with the vocabulary used in the 13 comprehension tests revealed that 96 percent or 402 of the 419 words used in these tests occurred in the SWRL General Lexicon. Figure 5 presents a grade level distribution of these 402 words according to the SWRL General Lexicon. In this figure, vocabulary words are also divided into three groups according to the grade range which their respective test is supposed to cover, e.g. K-1, K-3, K-6.

The structure of the Language Skills Framework

The content of the Language Skills Framework is organized along three distinct dimensions: hierarchically across skills, on a grade level basis across skills, and within each skill.

Hierarchical organization. The major distinction among the LSF skills is in terms of the three primary components:

```
  LSF
 /   \
O   R   W
  a   e   i
r   e   t
  l   f
```

Each of these three components is divided into areas which are further divided into subareas. Figure 6 shows the organization of the LSF down to the area level (e.g. phonology, decoding processes, handwriting). Figures 7, 8, and 9 present the overall organization of the oral language, reading, and writing
components to the subarea level. Notice that not all areas further divide into subareas. For example, the oral vocabulary area of the oral language component is not divided into subareas.

Figure 5. Percentage of lexical items found in oral vocabulary comprehension tests distributed by grade according to SWRL General Lexicon.

<table>
<thead>
<tr>
<th>Oral vocabulary comprehension tests</th>
<th>Grade</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tests for K-1a (N = 167)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Grade</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests for K-3b (N = 68)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tests for K-6c (N = 167)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>a. Del Rio (3-6 years), HABLA (K), James Language Domi-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nance (K-1), Language Dominance Survey (K-1), Screening</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for Auditory Comprehension of Language (3-6 years),</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spanish/English Language Performance Screening (4-5 years),</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test for Auditory Comprehension of Language (3-6 years).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. Test of Basic Skills in English (grades 1-3), Test of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Language Development (5-8 years).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Language Assessment Battery I and II (K-6), MAT-SEA-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAL (K-4), SCRDT Spanish/English Balance Test (K-5),</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Toronto Tests of Receptive Vocabulary (4-10 years).</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Two main principles were used in organizing the language skills along the hierarchical dimension. One principle was that similar or related skills were grouped at the area and subarea levels. For example, in the writing component the skills involving the spelling of consonants, vowels, affixes, etc. were naturally placed under the spelling area. These skills are also grouped within the spelling area into the distinct subareas of consonants, vowels, affixes, etc. The area and subarea distinctions and labels used in the reading and writing components are based on the distinctions and terms used in current instructional materials. The area and subarea distinctions used in the oral language component are drawn from the literature and research on language organization. Where possible, we have used labels and terms that would be most easily recognized.

The second principle used for organizing the language skills is a sequencing principle: those skills which are more elementary and/or more restricted in scope are ordered before more general skills or skill aggregates. An example of this principle from the reading component would be the ordering of a decoding skill like 'recognizes initial consonants' and a structural analysis skill like 'recognizes (or understands) the prefix re-'. The decoding skill is more elementary in that it would normally
Figure 6. Organization of the Language Skills Framework at the component and area levels.
Figure 7. Skills Framework for oral language.
Figure 8. Skills Framework for reading.

- **Reading (R)**
  - Decoding processes (DP)
    - Letter recognition (lr)
    - Decoding (d)
    - Syllabication (s)
    - Structural analysis (sa)
  - Comprehension (C)
    - Word meaning (wm)
    - Sentence comprehension/punctuation (sc)
    - Text comprehension (tc)
  - Literary skills (LS)
  - Study skills (SS)
Figure 9. Skills Framework for writing.
be acquired before the structural analysis skill. In addition, the decoding skill is more restricted in scope in the sense that 'initial consonants' are smaller units or elements in the reading process than prefixes like re-. A comparison of the reading skills in the decoding subarea with the skills in the structural analysis subarea would reveal that as a group the decoding skills are more elementary and/or restricted in scope than the structural analysis skills. Consequently, the decoding subarea comes before the structural analysis subarea in the decoding processes area.

Comparing skills across areas within a component, the skills in any particular area will tend to subsume, either specifically or in principle, the skills in preceding areas: e.g. oral language component: phonology, vocabulary, sentence structure, language use. The result is that the more global skills for each component are found in the rightmost areas (e.g. language use, study skills, discourse products).

These grouping and sequencing principles were also used within subareas (or areas) at the individual skill level whenever possible. For example, more complex and/or difficult skills are grouped after the less complex skills when such judgments can be made. See Figure 10 for the sequence of skills found in the word meaning subarea of the reading component.

### Figure 10. Sequence of skills in the comprehension area, word meaning subarea of reading component.

<table>
<thead>
<tr>
<th>Comprehension (C)</th>
<th>Word meaning (wm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1000</td>
<td>Recognizes grade level vocabulary</td>
</tr>
<tr>
<td>2000</td>
<td>Classifies words</td>
</tr>
<tr>
<td>3000</td>
<td>Recognizes word meaning in context</td>
</tr>
<tr>
<td>3100</td>
<td>Recognizes meaning of familiar words in context</td>
</tr>
<tr>
<td>3200</td>
<td>Recognizes meaning of unfamiliar word in context</td>
</tr>
<tr>
<td>3300</td>
<td>Recognizes meaning of words in connected text</td>
</tr>
<tr>
<td>3400</td>
<td>Recognizes meaning of words in context, given cue words</td>
</tr>
<tr>
<td>3500</td>
<td>Recognizes meaning of pronouns in context</td>
</tr>
<tr>
<td>3600</td>
<td>Recognizes meaning of multiple-meaning words in context</td>
</tr>
<tr>
<td>4000</td>
<td>Understands definitions</td>
</tr>
<tr>
<td>5000</td>
<td>Recognizes synonyms, antonyms, homonyms</td>
</tr>
<tr>
<td>5100</td>
<td>Recognizes synonyms</td>
</tr>
<tr>
<td>5200</td>
<td>Recognizes antonyms</td>
</tr>
<tr>
<td>5300</td>
<td>Recognizes homonyms and homographs</td>
</tr>
</tbody>
</table>

Grade level organization. The grade level organization is actually an intersection of the hierarchical dimension and the grade level dimension such that the skills found at each grade level are also grouped by component, area, and subarea.
Figure 11 shows a portion of the listing of first grade reading skills.

**Figure 11.** First grade reading skills.

<table>
<thead>
<tr>
<th>Decoding processes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1r 1000 Recognizes letter names (alphabet)</td>
</tr>
<tr>
<td>1r 2000 Recognizes letter shapes (upper/lower case)</td>
</tr>
<tr>
<td>1r 3000 Recognizes same/different letters in words</td>
</tr>
<tr>
<td>d 1100 Recognizes initial/final consonants</td>
</tr>
<tr>
<td>d 1310 Recognizes consonant digraphs (sh), (th), (wh), (ch)</td>
</tr>
<tr>
<td>d 2100 Recognizes short vowels, CVC words</td>
</tr>
<tr>
<td>d 2210 Recognizes V-e pattern ((i-e, a-e, o-e))</td>
</tr>
<tr>
<td>d 2300 Recognizes vowels (oo), (ee), (oa)</td>
</tr>
<tr>
<td>sa 1100 Recognizes verb endings (-s), (-ing), (-ed)</td>
</tr>
<tr>
<td>sa 2100 Recognizes noun plural ending (-s)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comprehension</th>
</tr>
</thead>
<tbody>
<tr>
<td>wa 1000 Recognizes grade level vocabulary</td>
</tr>
<tr>
<td>wm 3000 Recognizes meaning for word in context</td>
</tr>
<tr>
<td>tc 1100 Selects positive or negative sentence, as response to text or picture</td>
</tr>
<tr>
<td>tc 1200 Answers questions about a composite picture or simple story</td>
</tr>
<tr>
<td>tc 2200 Sequences story events</td>
</tr>
</tbody>
</table>

Within skill organization. Each skill in the Language Skills Framework is defined by several types of information. This was necessary in order to describe each skill clearly and allow for the development of additional assessment items if desired. Since a brief statement indicating the skill or a description of the skill is often not sufficient, detailed skill specifications were prepared that included sample assessment items.

The skill specifications are organized to present a Skill Code Number (uniquely identifying the individual skill), a Skill Statement (describing the skill), a Skill Description (the full description of an individual skill), and an Assessment Description that includes both Sample Items and an Item Description. One example of these types of information is provided in Figure 12 with an oral language skill at kindergarten level. It is taken from the sentence structure area and noun phrase subarea. This format for describing individual skills is utilized for nearly all skills. Exceptions to the foregoing format are those skills found in the area of language use in the oral language component. These skills should be evaluated by means of assessment routines which combine many skills in a single conversational event and through direct classroom observation. These methods are discussed in the Unique Features section.

A distinction that was not used as a major organizing principle for the skills in the oral language component is the distinction between speaking and listening skills. For example, the
Figure 12. An example skill specification.

Skill: 00 SSnp 2200p

Skill Statement:
Produces possessives: syllabic suffix.

Skill Description:
The student produces singular nouns with possessive suffixes. For this skill, the possessive suffix is syllabic; that is, it is pronounced as a separate syllable (e.g. mouse's, horse's). The syllabic suffix is pronounced /iz/ and occurs after the sibilants /s, z, sh, zh, ch, j/. (Production of non-syllabic suffixes is assessed by Skill 0B SSnp 2100p.)

The possessive form is generally used with animate objects (e.g. people, animals). It is rarely used with inanimate objects; an of phrase is more commonly used (e.g. the edge of the vase rather than the vase's edge).

Assessment:
Sample Items:

1. [picture: goose sitting on nest]
The goose is sitting on her nest.
Whose nest is it?
It is the [goose's] (nest).

2. [picture: fox wearing a coat]
The fox is wearing a coat.
Whose coat is it?
It is the [fox's] (coat).

3. [picture: horse wearing straw hat]
This horse is wearing a hat.
Whose hat is it?
It is the [horse's] (hat).

Item Description:
The stimulus for each item is a picture showing an animate object (e.g. goose, fox, horse) and an inanimate object (e.g. nest, coat, hat). The examiner tells the student that the animate object owns the inanimate object. The examiner then asks the student the question 'Whose [object] is it?' and elicits a response by adding the statement, 'It is the [blank] [object]'. Students at this level may not understand the meaning of the word blank in the last sentence. The examiner should use a hand gesture or other visual or vocal device to indicate to the students that a word is missing from the sentence and that they are required to complete the sentence.
Language Skills Framework could have been divided into four components, instead of three: listening, speaking, reading, and writing. There were three reasons for not making speaking and listening a major organizing principle for the oral language skills. First, assessment results organized by the four oral language areas provide more useful information for making placement decisions than scores organized by listening and speaking skills. Second, in principle some of the skills do not clearly separate out into either listening or speaking skills. For example, the classroom interaction subarea includes the skill of the student's responding to the teacher's question when called on by name. In terms of the student's overt behavior, this is a production skill; however, in order to respond appropriately, the student must also be able to understand the teacher's question as well as understand the device used by the teacher to call on the student. Third, very few assessment items (in a completely oral format) can be constructed so that they actually test only speaking or listening skills. Nearly all oral items require both skills to some degree. Sometimes a skill and its suggested assessment item can be designed so that production or comprehension plays a major role. For example, oral vocabulary production can be assessed (with picturable words) by pointing to an object in a picture and having the student name the object. But even this item requires a minimal amount of oral comprehension skill in the form of understanding general oral directions so that the student knows what she/he is being asked to do.

However, the comprehension/production distinction is incorporated in the oral language component at the skills level. In addition to their skills number, all oral language skills are coded 'c' for comprehension (or listening) or 'p' for production (or speaking) depending upon which mode (comprehension or production) plays a greater role in the actual skill and the associated assessment format. There are 50 oral language skills coded for comprehension and 43 coded for production.

The complete Language Skills Framework contains 285 different skills. For the purposes of this particular count, a skill is the smallest defined unit in the framework. Each such unit has a unique code number. However, because of the very diverse nature of some of these skills there are some striking differences between skills in terms of the ways in which they are defined. For example, 'comprehends second grade oral vocabulary' is a 'single' skill even though it is defined over a sample set of 200 words. Compare this with a skill defined on structural principles, such as 'produces possessives', which is the example given in Figure 12.

The distribution by area and by grade of all skills for the three components is shown in Figure 13. Notice that some skills appear at more than one grade level. The most extreme example of this is the area of phonology. The same set of skills is used for all grade levels. The largest amount of skill
duplication across grades occurs in the oral language component; there is very little duplication in the reading and writing components. This is because the reading and writing skills are based on graded instructional materials. Consequently, it was possible to propose finer grade level distinctions even though instruction for some skills may span two grades or more (Fiege-Kollmann 1979). Also notice that the reading and writing components do not contain kindergarten skills—these components start with first grade.

Figure 13. Area by grade level distribution of skills.

<table>
<thead>
<tr>
<th>Oral language skills</th>
<th>BK*</th>
<th>K**</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total no. of unique skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Phonology</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Vocabulary</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Sentence structure</td>
<td>13</td>
<td>16</td>
<td>16</td>
<td>11</td>
<td>11</td>
<td>5</td>
<td>6</td>
<td>6</td>
<td>46</td>
</tr>
<tr>
<td>Language usage</td>
<td>12</td>
<td>11</td>
<td>15</td>
<td>15</td>
<td>14</td>
<td>14</td>
<td>14</td>
<td>29</td>
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<tr>
<td>Total</td>
<td>93</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Reading skills</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total no. of unique skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Decoding processes</td>
<td>10</td>
<td>12</td>
<td>15</td>
<td>6</td>
<td>2</td>
<td>2</td>
<td>44</td>
</tr>
<tr>
<td>Comprehension</td>
<td>5</td>
<td>7</td>
<td>10</td>
<td>10</td>
<td>8</td>
<td>3</td>
<td>33</td>
</tr>
<tr>
<td>Literary skills</td>
<td></td>
<td>5</td>
<td>5</td>
<td>10</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Study skills</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>6</td>
<td>16</td>
<td>103</td>
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<td>Total</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Writing skills</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>Total no. of unique skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Handwriting</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Spelling</td>
<td>3</td>
<td>8</td>
<td>2</td>
<td>10</td>
<td>5</td>
<td>5</td>
<td>32</td>
</tr>
<tr>
<td>Mechanics</td>
<td>4</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>5</td>
<td>20</td>
<td>20</td>
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<tr>
<td>Language</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td>2</td>
<td>4</td>
<td>2</td>
<td>15</td>
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<tr>
<td>General discourse</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Discourse products</td>
<td>1</td>
<td>2</td>
<td>2</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>89</td>
</tr>
<tr>
<td>Total</td>
<td>89</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Beginning kindergarten; **Kindergarten

Unique features

As a result of the various types of information provided with each skill, the Language Skills Framework is one of the most detailed skills frameworks for the elementary school range. It is also one of the most comprehensive language frameworks.
currently available. Its comprehensiveness derives from the fact that the reading and writing skills are the result of a thorough analysis of over 20 instructional programs augmented by minimal competency lists, and that the oral language component proposes skill areas for language assessment which have never before been covered on a systematic basis. These oral skills are the language use skills whose inclusion is unique both in terms of the skills themselves and the suggested assessment methods. The 10 classroom interaction skills, which are listed in Figure 14, should be assessed by observing the target student's performance with these skills in the classroom.

Figure 14. Classroom interaction skills.

<table>
<thead>
<tr>
<th>Language Use (LU)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classroom interaction (cl)</td>
</tr>
<tr>
<td>Selection process</td>
</tr>
<tr>
<td>1100p</td>
</tr>
<tr>
<td>1120p</td>
</tr>
<tr>
<td>1200p</td>
</tr>
<tr>
<td>1300p</td>
</tr>
<tr>
<td>1400p</td>
</tr>
</tbody>
</table>

Clarification

<table>
<thead>
<tr>
<th>Evaluation</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000p</td>
</tr>
</tbody>
</table>

3100c | Understands and responds appropriately to explicit evaluation of a response |
3210c | Understands and responds appropriately to inexplicit negative evaluation of a response |
3220c | Understands and responds appropriately to inexplicit positive evaluation of a response |
3300c | Understands and responds appropriately to positive provisional evaluation of a response |

The assessment information provided with these skills includes suggested observation and skill recording techniques. The assessment of the classroom directives skills should also be done in an interactive context. In this case, the context is an explicit 'assessment routine' which is essentially a scripted sequence of statements and actions for the interviewer. Examples of some of these directive forms and a suggested
assessment routine are given in Figure 15. Included in the materials for the directives subarea are sample score sheets that can be used for recording and scoring the student's responses.

Figure 15. Example assessment routine for classroom directives.

Assessment Routine #2 (for 1111c, 1210c, 1220c, 2100c, 3110c)

Set-up: Examiner and student are seated at a table. On the table are some sheets of drawing paper and set of crayons, including brown, green, blue, and red. The examiner directs the student to draw a picture on a sheet of drawing paper.

**Filler**

We're going to draw a little boy's face.

1210c

Let's make a big circle with the brown crayon.

1111c

Make his eyes first. (Waits for student to find and pick up a crayon.)

1220c

No. Let's not use that one. (Waits for student to put down crayon.)

1210c

Let's use another one instead. (Waits for student to draw eyes with another crayon.)

**Distractor**

How do you think he would look if you put his nose here? (Indicates the forehead area of the drawing, and waits for response.)

3110c

OK. Can you draw his nose now? (Indicates normal nose position in center of face on the drawing.)

**Filler**

Well, all he needs is a mouth.

3110c

OK. Would you give him a mouth? (Waits for student to draw mouth.)

**Filler**

That's very good.

**Distractor**

I'd like to give him some hair. (Hesitates, then draws hair on the picture.)

2100c

OK. I need the paper with the picture on it. (Waits for student to hand it over.)

Thank you.
Another aspect of the LSF that should be mentioned is its relation to the current discussion of discrete point and global assessment techniques (Davies 1978a,b; Canale and Swain 1980; Oller and Perkins 1980). All skills in the LSF are defined as precisely as possible. However, in the assessment of these skills, the framework uses both discrete point and integrative formats. For some skills, particularly discrete skills such as the sentence structure example given earlier (Figure 12), the sample assessment items are discrete point items. But for the more complex or aggregative skills, the format and context of the assessment item are integrative. For example, as indicated earlier, the language use skills should be assessed in an actual interaction context. Also, writing skills such as writing a composition should be assessed by means of an actual composition. However, the assessment of the writing should be done on a skill specified basis (Humes 1980a). In order to make this possible, the LSF contains detailed information on scoring criteria and scoring guides. For example, the sixth grade skill 'writes an expository composition' is presented with seven pages of skill specifications. These include a list of the subskills that make up this task, a drawing and directions to the student indicating the content and structure of the composition, and detailed scoring criteria and scoring guides (example given in Figure 16).

Next stages

The SPS Resources have been reviewed by our Advisory Panel, the Office of Program Evaluation, and two review teams convened by the Office of Bilingual Education and Minority Languages Affairs (OBEMLA). Following this review process, the Student Placement System Resources were sent to all current Title VII programs at the request of OBEMLA. However, because it is recognized that a product as large and as complex as this cannot be introduced without training, implementation, and refinement, continuation phases of this project are either in process or being planned. A series of training programs is planned for fall of 1980 at the Southwest Regional Laboratory for training of staff of the Bilingual Education Service Centers and the Evaluation, Dissemination and Assessment Centers which are funded through OBEMLA. After their training at SWRL, this center staff will provide assistance to the local Title VII programs to implement student placement systems.

A step currently being considered beyond training center staff is that of a limited number of SWRL-assisted implementations of the Resources with Title VII programs. This step has two advantages: (1) it provides SWRL with close contact with a number of Title VII programs, giving SWRL the opportunity to make a detailed assessment of the Resources and plan any necessary refinements; (2) it provides timely and extended help to selected programs. It is expected that a refined version of the Student Placement System Resources, including
the Language Skills Framework, will be produced as part of the implementation activity.

Figure 16. Scoring criteria for writing an expository composition.

<table>
<thead>
<tr>
<th>Scoring criteria</th>
<th>Good</th>
<th>Acceptable</th>
<th>Unacceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>Content:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses a topic sentence</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Includes one paragraph of comparisons</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Includes one paragraph of contrasts</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Organizes the comparisons and contrasts logically</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses precise language</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses transitional expressions for logical order</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses beginning, body, and end paragraphs</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Comment: The criterion 'Uses beginning, body, and end paragraphs' should be deleted if selected-response assessment is used for Skill W6 GDpo 7000.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Form:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses correct grammar</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Uses good sentence structure</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Capitalizes and punctuates correctly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Spells correctly</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Writes legibly, with appropriate margins and indentation</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
NOTE

This project was funded through USOE Contract 300-78-0489. Over two dozen SWRL staff worked on this project and nearly that many contributed to the Language Skills Framework. Credit for the success of the LSF should go to these people: Project Manager, Masahito Okada; LSF Development, Harvey Rosenbaum; Writing Component, Ann Humes, Teanna Boscon, Bruce Cronnell, Caroline Fieker, Larry Gentry, Joe Lawlor; Reading Component, Laila Fiege-Kollmann, Aaron Buchanan, Martha Kuehn, Shirley Paddit, Jannine Perkins; Oral Language Component, Harvey Rosenbaum, Victor Berzins, William Brock, Denise Borders-Simmons, Mary Ellen Garcia, Kenneth Kim, Priscilla Maltbie, Robert McCoard, William Russell, Sande Prasad, David Thrift, Patricia Yee. We would like to note our appreciation to the LSF consultants for their helpful comments and suggestions: Eugene J. Briere, Rexford G. Brown, Evelyn Hatch, Hugh Mehan, and Richard Venezky. I would like to thank Laila Fiege-Kollmann and Ann Humes for their critical and helpful reading of a draft of this paper. And a final note of thanks to our secretarial staff, and art and print shop staff who always catch the tail-end of the 'rush'.

REFERENCES

REFERENCES


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THE CONTRIBUTION OF ETHNOGRAPHIC RESEARCH TO BICULTURAL BILINGUAL EDUCATION

Courtney B. Cazden
Robert Carrasco
Abdil Abel Maldonado-Guzman
Harvard University

Frederick Erickson
Michigan State University

There is special meaning in talking about the contribution of ethnographic research to bilingual education at a Georgetown University Round Table on Languages and Linguistics. One of the first, and still one of the most widely cited, ethnographic studies focusing on language and cultural issues in education was first reported here at Georgetown exactly 10 years ago. At the 1970 Georgetown University Round Table on 'Bilingualism and Language Contact: Anthropological, Linguistic, Psychological, and Sociological Aspects', Susan Philips reported her research on the 'acquisition of rules for appropriate speech usage' on the Warm Springs Indian reservation in Central Oregon. From a comparison of interaction patterns, which she called participant structures, in Indian and non-Indian classrooms and in the Indian community, she was able to explain the Indian students' silence and nonparticipation in traditional classroom lessons. In her words,

Indian children fail to participate verbally in classroom interaction because the social conditions for participation to which they have become accustomed in the Indian community are lacking ... In reviewing the comparison of Indian and non-Indian students' verbal participation under different social conditions, two features of the Warm Spring children's behavior stand out. First of all, they show relatively less willingness to perform or participate verbally when they must speak alone in front of other students. Second, they are relatively less eager to speak when the point at
which speech occurs is dictated by the teacher, as it is during sessions when the teacher is working with the whole class or in a small group. They also show considerable reluctance to be placed in the 'leadership' play roles that require them to assume the same type of dictation of the acts of their peers.

Parallel to these negative responses are the positive ones of a relatively greater willingness to participate in group activities which do not create a distinction between individual performer and audience, and a relatively greater use of opportunities in which the point at which the student speaks or acts is determined by himself, rather than by the teacher or a 'leader' (1970:95, 85-86).

Philips (1974) later called these rules for appropriate language use the 'invisible culture'. Dell Hymes, who introduced Philips at Georgetown University, wrote about work such as hers in a more recent paper entitled 'Ethnographic Monitoring' (in press):

Schools have long been aware of cultural differences, and in recent years have attempted to address them, rather than punish them. Too often the differences of which the school is aware, of which even the community is aware, are only the most visible, 'high' culture symbols and the most stereotyped conventions. What may be slighted is the 'invisible' culture (to use Philips' title), the culture of everyday etiquette and interaction, and its expression of rights and duties, values and aspirations, through norms of communication. Classrooms may respect religious beliefs and national custom, yet profane an implicit ceremonial order having to do with relations between persons. One can honor cultural pride on the walls of a room yet inhibit learning within them.  

In the 10 years since the 1970 Georgetown University Round Table on Languages and Linguistics, ethnographic research in education has grown into a strong alternative to the previous hegemony of educational psychology, to use McDermott's (in press) phrase, in the educational research field. (It has grown so fast, in fact, that in the February, 1980 newsletter of the American Educational Research Association, ethnographer Ray Rist [1980] even worries about the growth in an article entitled 'Blitzkrieg ethnography: On the transformation of a method into a movement'.) But probably because of the lack of appropriate personnel, very little of this ethnographic research has been done in bilingual education settings. Except for a few studies of classroom code-switching (see, for example, articles in Duran, in press), it is still true, as Fishman wrote a few years ago (1977:32), that
There is as yet no data on classroom dynamics even though the consensus of expert opinion is definitely that the school environment is of overriding importance with respect to bilingual education outcomes ... social dimensionality must be recognized within the bilingual education classroom, rather than merely outside of it in 'the community' and 'in society'. Societal factors dictate much of what is taught and to whom; as well as how it is taught and by whom; and finally how all of those involved in the teaching-learning process interact with each other ... Unfortunately, none of these topics has been well documented to date and the ethnography, the sociology, the social-psychology and the educational psychology of the bilingual education classroom are all little more than gleams in the eyes of a few researchers (emphasis in the original).

In a footnote to that statement, Fishman mentions the now well known Mexican-American education study by the United States Civil Rights Commission (1972): an observational study of teacher-student interaction in 494 elementary and secondary classrooms in the Southwest. Fishman relegates that study to a footnote because none of the classrooms were bilingual. We mention it, but also only in passing, in order to explain why this observational study is not properly considered ethnographic.

Socially, the Commission study is very significant. As Fishman says (1977:32), it 'clearly documents intra-classroom stratification in the treatment of Anglos and Chicanos', and that in classrooms that had been selected from only those schools with no previous civil rights violations or investigations, and in which teachers were aware that an observer from a Federal civil rights agency was present. But its usefulness is limited because the data consist only of frequencies of coded categories of teacher and student talk. Such quantitative evidence can be sufficient for legislative action or legal decisions, but it is not sufficient to guide attempts at change. When one tries to move from summary findings to search for the classroom dynamics that produce them, one must change to more qualitative sociolinguistic and ethnographic methodology. In the conclusion of her own study, Philips comments (1974:311-312) on the Commission Report:

The orientation of the Commission Report is such that cultural differences of the sort considered [here] are not dealt with in attempting to account for the disparities discussed. The impression is given that the disparities are due to what is typically referred to as discrimination. But even where teachers are well-intentioned, the results are similar, because the minority students' efforts to communicate are often incomprehensible to the teacher and cannot be assimilated into the framework within which she operates.
The teacher, then, must be seen as uncomprehending, just as the students are. And it is primarily by virtue of her position and her authority that the students and not the teacher come to be defined as the ones who do not understand.

The ethnographers' hypothesis is that problems in cross-cultural communication contribute to the patterns of interaction in those Southwestern classrooms as they do in Warm Springs. Several ethnographic studies in bilingual education settings are currently in progress. We report on our Bilingual Classroom Interaction Project being conducted in Chicago, then describe three other bicultural—though not bilingual—programs, and end with questions for educational policy raised by this work and by the draft revision of the Lau Guidelines.

The Bilingual Classroom Interaction Project. In Chicago, we have been observing and videotaping in two first grade classrooms where the teachers and all their children are Mexican-American. Our purpose is to describe the social and cultural organization of interaction, especially as it can be shown to differ from interaction in more mainstream Anglo classrooms. In some ways, our two classrooms differ noticeably—one more structured, the other more open. But in other ways, in qualitative aspects of the teacher-student relationships, these two teachers both express a personalized style, a style characterized by 'cariño'—a close and caring relationship. To members of Hispanic communities, the concept of cariño is nothing new. One contribution of ethnographic description is to make explicit for more widespread awareness what members of that (or any other) community tacitly know and do.

For this discussion, we are going to talk only about the more structured classroom, which is conducted wholly in Spanish except for 30 minutes a day of ESL. To give a flavor of life in this room, we quote from the comments in Cazden's field notes, written immediately after her first visit to the classroom in November, 1978. These comments express the admiration of a former first-grade teacher:

I have never seen as well-functioning a first grade society. By this I mean the extent to which the children know where and when and what to do; there is a minimum of time spent giving directions (cues so reduced that often Robert Carrasco and I never were aware of them); little if any need for negative sanctions; maximum task focus on part of children. And yet all this without any sense of strong military-type discipline. The children can take 'time out' to chat or dance and never get out of control ... Aside from making the room a pleasure to spend time in, such a smooth system should have tremendous educational advantages: minimum time spent
on discipline and maximum available for learning (Cazden, field notes, Chicago, November 27, 1978).

Our research task can be described as an attempt to determine whether cultural congruence between the teacher and her children contributes to this remarkable social organization.

Consider just the first event in each school day. We have eight examples of this event on videotape, of which one focal instance from a day in December, 1978 has been examined in some detail. Briefly, before school begins, a few children arrive and put the chairs down. Without any noticeable signal from the teacher, they gradually move quietly but not silently into a circle on the floor in the open space in front of the blackboard; girls on the left and boys on the right, bringing their homework papers with them. Several children wait and accompany the teacher as she walks over, morning coffee in hand, to join the children on the floor. During the next 12 minutes, two instrumental tasks are accomplished: collecting tarea 'homework' and calling the roll. What is obvious to even the first-time observer is their flawless execution; what we realized only in more careful videotape analysis are the culturally responsive expressive functions that are accomplished as well.

The homework is collected in a participant structure that conforms to descriptions of mainstream classroom discourse (e.g. Mehan 1979). The basic lesson sequence, addressed to each child in alphabetical order, has the usual three parts. In this case, the teacher calls each child's name; the child quietly hands her the homework; and the teacher acknowledges by recording a mark in her grade book. More extended conversations, which Mehan calls 'conditional' sequences, are sometimes interpolated into this basic structure: when the teacher asks whether the child knows the work (to which some nod 'no' with surprising honesty); or elicits a reason for the homework's absence; or praises with words and applause. But during these 12 minutes of mainstream classroom discourse structure, there are frequent expressions of cariño: in-group forms of address; frequent use of diminutives; a reminder to the children of norms of interpersonal respect; and expressions of the teacher's knowledge of her children's family life. A few words about each.

Except when actually calling the children's names during both homework collection and roll call, the teacher speaks to each child with terms of endearment such as papi or mami, sometimes shortened to pa and ma. For instance:

<table>
<thead>
<tr>
<th>T. Carlos López</th>
<th>Carlos López.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los estudiaste, papi?</td>
<td>Did you study them, papi?</td>
</tr>
<tr>
<td>Sí? OK.</td>
<td>Yes? OK.</td>
</tr>
<tr>
<td>Ya los sabes todos? Sí?</td>
<td>You know them all? Yes?</td>
</tr>
</tbody>
</table>
Of the 20 children present and called on during homework collection, the teacher calls the name only initially to 10 children; adds an affectionate term of address to another 10 children; and repeats the child's name only in 3 of the 15 extended sequences.²

The teacher's diminutives on this particular day are as follows:

Le tengo que poner su estrellita.
'I have to put down a star for you.'

Lo sabes tú? Sí? Toditos?
'You know them? Yes? All of them?'

Yo quiero que tú me digas con tu boquita, papi.
'I want you to tell me with your mouth, papi.'

Quiero que estén calladitos, eh?
'I want everybody to be quiet, OK?'

Gracias a Diosito por esas abuelitas.
'Thank God for those grandmothers.'

No translation carries the correct connotation of these diminutive endings. They do not change the meaning of the term to which they are attached (star, etc.), but rather function here --like tú vs. usted--to express closeness in the speaker-listener relationship. Evidence that the children and teacher share this stylistic feature apart from its literal meaning comes when one child refers that day to Frederick Erickson, a more than six-foot-tall observer, as un profesorcito! The teacher had explained that Erickson had been her teacher, 'like you have me as your teacher', when she had been at Harvard. Introduction of the visitor ended with this interchange:

T. Él is mi maestro.
'He is my teacher.'

C. Maestro como un profesorcito.
'Teacher like a professorcito.'

T. Como un professorcito de verdad que sí. OK.
'Like a professorcito, that's right. OK.'

The children were reminded of the importance of respeto when the teacher asked Vincente to say Con permiso di pa 'Say "Excuse me"', pa' when he stepped in front of another child to hand in his homework, even though the seating arrangement on the floor makes that unavoidable. The teacher is expected by parents to continue and reinforce the teaching of manners started in the home.

Evidence of the teacher's knowledge of the children's families appears in sequences of noninstrumental talk at the end of
both the homework collection and the roll call. When Edith--the classroom comadre-informadora 'gossip know-it-all' reports at the end of homework collection that Juan got upset in the lunchroom the day before, the teacher asks 'Were you mad, papi? at your mother?", knowing that his mother is a cafeteria volunteer. Again, at the end of roll call, the teacher accounts to the children for the absence of Anibal's mother, a classroom aide, with a long description of her illness, and then asks questions about Juanito's mother, whom she knew had also been sick. When Juan explains that he stayed with his grandmother while his mother was sick, the teacher expresses, in her thanks to God, her shared understanding of the extended family in Hispanic communities, and of the important role of grandparents in children's lives.

Gracias a Diosito por esas abuelitas que nos cuidan, por que si no, estamos muy tristes sin las mamis.
'Thank God for those grandmothers who take care of us, because otherwise we are very sad without mommies.'

In addition to the specific stylistic features of address terms, diminutives and other expressions of respect, and personalized knowledge, we believe that in time slot, topic, and style, this talk about health and families at the beginning of the school day is an aspect of invisible Latino culture. In Hispanic communities, when people come together to transact any business, it is inappropriate—even rude—to begin the 'agenda' immediately. Hall (1959) describes the problems encountered by an Anglo businessman who expects to open an appointment with an immediate focus on business affairs. To be effective, he must learn to use that beginning slot in the conversation as this teacher has so effectively done.  

Three studies of bicultural education. Our argument that the effectiveness of the social organization in the Chicago classroom is in part due to its culturally appropriate features will be stronger when we have a comparison with an equally bilingual but not equally bicultural teacher. In three other studies, the argument for cultural appropriateness can be made more strongly. These describe two classrooms on the Odawa reservation in Ontario, the Kamehameha program in Hawaii, and a Catholic boarding school for Eskimo students in Alaska.

The Odawa Indian Reservation. On the Odawa Indian Reservation in northern Ontario, Erickson and Mohatt (in press) wanted to see whether Philips' findings could be generalized to other reservation settings, and whether they could be used to improve education for other Indian children. Their work included first-hand observation; videotaping in two first grade classrooms and in some of the children's homes; and interviews
and collaborative research with the school staff in summer courses that involved Indian staff members in field observation and reflections on their own lives. Videotaping was done in the classrooms of two teachers, both considered very effective by their colleagues. One was an experienced Indian teacher who was a member of the local reserve community and had taught there for 21 years. The other was non-Indian, an experienced teacher who was teaching Indian children for the first time.

The Indian teacher taught in ways that those Warm Spring children would have felt comfortable with. She taught children in small groups; her comments to individual children were what Erickson and Mohatt called 'privatized': face-to-face, soft in volume, and very individual. Her pace was slower and smoother in ways they document in precise quantitative terms. What one sees in this Indian teacher's classroom, and in other classrooms taught by Native American teachers, is not an ideal cultural type of 'purely Indian' interactional etiquette, but a 'mixed form' typical of contemporary Native American communities. The Indian teacher had intuitively found ways of accommodating the culturally 'mainstream' English-Canadian curriculum to Odawa principles of communicative etiquette. Her class was truly bicultural.

The Anglo teacher, at least in the beginning of the year, was much more the typical mainstream teacher, contrasting with his Indian colleagues in important ways. But mixed forms also appeared in his teaching as the year went on. In the beginning, the children were arranged in rows of individual seats and spent much of each day in whole group lessons, in which the teacher addressed questions to individual children by name. But as the year progressed, the non-Indian teacher adopted some of the ways of his Indian colleague next door. These adaptations did not derive from any explicit theory of Odawa communicative etiquette. Instead, they seem to have come partly from the supervisory suggestions made by the principal of the school, who was a member of the reserve community and who seems intuitively to have understood the underlying value of the Indian first-grade teacher's style. They may also have come partly from the teacher's own 'radar' that told him what kinds of changes worked. For whatever reason, as the year progressed, the children were seated in table groups instead of rows during whole group lessons; the teacher began to call on table groups rather than individual children; he decreased the total amount of time spent each day in whole group lessons and increased the amount of time spent with children in small groups. In the public arena of large group instruction he still tended to 'spotlight' individual children. But by changing overall patterns of classroom organization, 'privatized' arenas for contact with students were introduced, and these became the predominant settings for academic skill
instruction as the year went on. This teacher had also de-
veloped culturally mixed forms of classroom participation struc-
tures.

The Kamehameha program in Hawaii. The Kamehameha Early
Education Project (KEEP) is a private experimental school dedi-
cated to finding ways to improve the academic performance of
Polynesian Hawaiian children in the early grades (Au and
Jordan in press). When a phonics-based method of teaching
reading was used for the first two years of the program, the
children's reading performance was in the bottom quartile on
standardized tests. In the program's third year a new ap-
proach to reading instruction was tried, in which a greater
emphasis was placed on reading comprehension. The new pro-
gram, selected because its pedagogical model was the opposite
of the previously unsuccessful one, had unanticipated conse-
quences.

In the new approach, comprehension was stressed in small
group discussions of the stories to be read. These discussions
gradually took on an overlapping turn structure similar to the
overlapping speech that is common in ordinary Polynesian con-
dversations, and especially in the stylized speech event termed
'talk story' (Watson-Gegeo and Boggs 1977). In talk story, a
story is co-narrated by more than one person, and the speech
of the narrators is also overlapped by audience responses.
The Kamehameha children were familiar with this structure in
their lives outside of school, and gradually introduced it into
the story discussions at school when the structure of the read-
ing groups made that possible.

After this change, the children's reading achievement in-
creased dramatically. Researchers Au and Jordan attribute
this dramatic growth in reading to the children's fluent use of
the talk story discourse structure as an aid to reading com-
prehension, although the researchers only recognized the
similarity after the fact. The Kamehameha reading lessons
still looked like school talk; they only partially resembled the
ways of speaking of the talk story speech event as it is found
in more pure forms in everyday life in the community. The
reading lesson thus became a culturally mixed form; a small
change in participant structures which seems to have brought
large improvements in academic achievement.

St. Mary's Boarding School in Alaska. The last example is
Klienfeld's (1979) study of effective bicultural education at St.
Mary's Catholic Boarding School for 200 Eskimo high school
students in southwestern Alaska. This is a book-length study,
the first to be published in Rist's Ethnographic Perspectives
on American Education. St. Mary's had been singled out by
Collier (1973) in his earlier film study of Alaskan education,
and Klienfeld set out to find out what makes St. Mary's work.
St. Mary's graduates have had exceptionally high rates of college entrance and success, as far back as the 1960s, before special college programs for Native Americans were instituted. As a group the students and graduates are exceptionally self-confident and verbal. For example, Collier (1973:102-103) describes an evening when St. Mary's seniors stopped at a public high school in Bethel on their way home from a trip:

One by one, speaking through a mike, the St. Mary's students address the whole assembly in clear, spirited English with accounts that send the Bethel Eskimos into roars of laughter and bring mystified looks to many of the Bethel teachers. As one teacher was heard to say, 'These kids have had an education! We can't get our boys to speak like that!' Both boys and girls from St. Mary's spoke out fluently with beaming and confident faces. The miracle of education had come to Bethel.

As impressive as the students' college success and their verbal ease is what Collier calls their 'psychic well-being', and their ease in adjusting back into village life, often in leadership positions.

These results seemed all the more surprising because, in Klienfeld's words (1979:12),

St. Mary's seemed a most unlikely institution to have impressive effects on Eskimo students caught in the maelstrom of cultural change. A run-down boarding school in southeast Alaska, it is the last of a dying breed, a mission school established by the Jesuits to bring Catholicism to the Eskimo along the Bering Sea Coast.

To find out what made St. Mary's work, Klienfeld did extensive participant observation; interviews with students, graduates, and staff; and analyses of videotapes of 'school situations that particularly revealed the school's ideology and structure of interpersonal relationships'.

She found that St. Mary's is staffed by young spiritually committed volunteers without spouses or children who are 'free to devote all of their passionate energies to the students' (p. 50). To sum up their mode of working in one sentence: school was constantly in session. 'A volunteer and a young man at St. Mary's might be teacher and student, coach and basketball player, co-members of a school repair crew, and buddies in late night bull sessions' (p. 131). 'Coming from small villages where everyone knew everyone else across many situations, students sought a similar structure of social relationships' (p. 30).

'Most classes taught by volunteers were a mixture of factual information, personal experiences of the teacher, references to Eskimo village life, delightful in-jokes, and broad humor' (p. 34). And the goals of responsibility to others and inner
emotional stability were achieved 'by transforming the small stuff of life into tests of character, into dramas of moral choice' (p. 64).

In a provocative conclusion, Klienfeld suggests that the hyphenated term 'bilingual-bicultural' may be unfortunate, because the formal parallelism of the two terms may mask important differences between the phenomena themselves. Between two languages (or two dialects), the appropriate relationship in education and in life is separation, with code-switching from one to another in appropriate contexts. But biculturalism may require not separation and switching, but a fusion of elements from both cultures; not dualism but synthesis. At St. Mary's, as in the classrooms in Chicago, Ontario, and Hawaii, the school fuses elements from both cultures, whatever the language of instruction. (See also Paulston 1978.)

In all these situations, the bicultural fusion happened without explicit ethnographic knowledge or guidance. But ethnographic research has, after the fact, documented the elements of that fusion as an aid toward its more widespread application. Micro-ethnographic analysis of videotaped scenes reveals the specific features of the cultural organization of social relationships. And the findings of general (and more macro) ethnography help place that microethnographic analysis in the broader context of school and community life. We believe these studies have important implications for the education of minority children and their teachers in complex multi-ethnic societies.

Implications for educational policy. The Office of Civil Rights document known as the Lau Guidelines (OCR 1975) includes in its second requirement a direction to school systems to consider cognitive and affective aspects of how children learn so that appropriate teaching styles can be provided that will maximize their educational achievement. Although the word 'culture' is not used, that document did raise the important question about what, in addition to language, must be changed. In this sense, the Guidelines directed our efforts toward culturally, as well as linguistically, appropriate education. That guideline, as it is now worded, is not without its problems, especially because of the inconclusive research on cognitive styles. (See De Avila's paper in this volume.) But as Cazden and Legett (in press) argue in a review of research relevant to the implementation of this guideline, cultural differences exist not only in cognitive information processing styles, but also in the interactional contexts in which people prefer to learn and to demonstrate what they have learned in some kind of performance. Classroom participation is both an indicator of children's learning and a valuable learning activity in itself, especially in bilingual programs. Therefore, the diagnosis of classroom environments, and the development of the kinds of bicultural environments described in this paper, are extremely important.
The revised Lau Guidelines, in draft form in May, 1980, are strengthened in many ways but not with respect to biculturalism. In one version, a section entitled 'Culture' says only, 'A recipient's education programs and activities shall be operated with respect for the culture and cultural heritage of the students enrolled in them' (Section 80.40). And the definition of 'qualified bilingual education teachers' says about language only that teachers must be 'able to converse in the appropriate primary or home language with considerable proficiency' (Section 80.32). More generally, ESL and foreign language instruction is increasingly being broadened beyond patterns of language structure to cultural patterns of language use, as Muriel Saville-Troike argues so persuasively in this volume (see also Taylor and Wolfson 1978). It is all the more striking, therefore, that the revised Lau Guidelines draft reverts to a narrower conception of language in bilingual education.

Interestingly, a parallel narrow interpretation of the domain of governmental decree occurred in the 1979 Ann Arbor decision on Black English (Ann Arbor ... n.d.; Perry 1980). Originally, the plaintiffs in that case demanded help in overcoming academic problems that resulted from social, cultural, and economic—as well as linguistic—differences. But the court dismissed all of the claims relating to the cultural, social, and economic deprivations, and ruled in favor of the children only on the barrier of language, where language is defined by its structural features alone. As Dell Hymes and others argued at a conference on the case (Detroit, February, 1980), cultural and social factors will have to be reintroduced in actual implementation of the decree, via a broader conception of language that includes differences in language use and interactional style.

With respect to bicultural/bilingual education, perhaps only its bilingualism can be required by law. When the Court of Appeals rejected the Cardenas Plan in Denver, it explicitly said just that:

The clear implication of arguments in support of the court's adoption of the Cardenas Plan is that minority students are entitled under the fourteenth amendment to an educational experience tailored to their unique cultural and developmental needs. Although enlightened educational theory may well demand as much, the Constitution does not (Center for Law and Education 1975:55).

The authors of the revised Lau Remedies seem to agree with Judge Joiner in Detroit and the Court of Appeals in Denver about the limits of what the Constitution demands. But if, as part of 'enlightened educational theory', we want to go beyond that legal minimum toward education that is bicultural as well as bilingual, ethnographic research has an essential role.
A joint committee of two affiliates of the American Anthropological Association—the Council on Anthropology and Education and the Society for Applied Anthropology—has issued a strong statement on 'Culture and bilingual education' (Council ... 1979). Their resolution states in part that 'culture is an important part of the dynamics of the teaching–learning process in all classrooms, both bilingual and monolingual'. We agree, and urge continued ethnographic research to document all that statement means.

NOTES

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1. Although it is not evident from the title, Hymes' paper is entirely about bilingual education and the many potential contributions of ethnographic research to the planning, conduct, evaluation, and justification of bilingual education programs. We see our focus on classroom interaction as exemplifying one part of his broader view.

2. An analysis of the distribution of basic and extended sequences during homework collection raises an important issue that is beyond the focus of this paper.

Basic sequence: T calls 'Edith Roldan'; receives paper from Edith, who is at her right side, without speaking or looking at her; and marks in her record book.

Extended sequence: See T's talk to Carlos Lopez, on p. 68 of this text. Although on this particular morning 7 girls and 13 boys are present and called on for their homework, 3 of the 5 basic sequences are with girls. That is, the boys are receiving proportionately more comments on their work than the girls. It would be easy to jump to a hypothesis about differentiated behavior of boys and girls as another aspect of Hispanic culture. Whether or not such differentiation is evident in a fuller analysis of life in this classroom, we know that such differentiation has been documented in Anglo classrooms as well (e.g. Dweck et al 1978). In the distribution of address terms during the extended sequences, girls receive proportionately more affectionate terms than the boys; 4 utterances of mami to the 4 girls vs. 7 utterances of papi to the 11 boys.

3. See Cazden (1979) for a complementary discussion of this same teacher's interactional style within the framework of Brown and Levinson's (1978) comprehensive model of contrasting styles of politeness. And see Yanguas (1980) for an example of
research methodology appropriate to this same Hispanic culture. Yanguas interviewed 25 working-class Puerto Rican adults as part of a larger study of the acquisition of English as a second language (directed by K. Hakuta and H. Cansino, Huron Institute, Cambridge). She is herself of Spanish background, and her mother works as a seamstress in the Boston area. Some of the informants were co-workers of her mother's, or co-members of the same Catholic parish. Because her first interview was with a woman her mother knew well, the mother offered to come along. The mother's presence helped so much to create an informal speech setting, a culturally appropriate combination of social talk and interview, that her mother—or sometimes her father—accompanied Yanguas on almost all her interviews, even with strangers. Because such a research procedure would seem so strange—even bizarre—within the mainstream Anglo culture, this example may highlight the importance of cultural differences even more vividly than the classroom examples.

4. For an international view, see LeVine (1979). From Navajo, Japanese, and Gusii (Western Kenya) examples, LeVine discusses the demands of Western schools—such as competitiveness and public assertions of self—and the ways in which different non-Western societies respond to the 'institutionally induced noncongruence' between these schools and their own indigenous culture. Outside the domain of education altogether, religious observances can also be bicultural, sometimes controversially so, as in Zaire, where Catholicism (43 percent of the population) 'is overlaid with African meaning'. The New York Times (May 3, 1980) reports the Vatican's views on preparations for Pope John Paul II's visit: 'The Vatican declined a proposal by the Zairian clergy that this Sunday's mass, with the Pope as the principal celebrant, be said in Lingala, the language of the capital. The mass will be in Latin and in French, the official language of this former Belgian colony. The length of the Lingala rite was one of the major reasons given for its refusal, but several bishops in Kinshasa said that they felt the Pope turned it down largely to avoid the impression that the Vatican approved the African liturgy.

"It is still an experiment", a Jesuit priest said. "For seven years the Vatican has not said no to us, but we have not been given formal approval either."

'The liturgy widespread in Zaire and adapted to many tribal languages, makes a place for dancing and features drums, spears, and knives. Ancestors are honored along with saints, for ancestor worship is an ancient part of the culture. The congregation is allowed to shout back at the priest in the pulpit and to challenge him with questions. Throughout, though, the priest is given the respect that a village chief commands, and the clergy here anticipate criticism from the Pope for this change in the ancient rite, among others.' As with the research methodology example cited, this religious example may...
lend added weight to classroom work. If a bicultural context adds to the power of worship, should it not add to the power of education as well?

REFERENCES


THE CONSTRUCT OF LANGUAGE PROFICIENCY IN BILINGUAL EDUCATION

James Cummins  
The Ontario Institute for Studies in Education

It is frequently claimed (e.g. Troike 1978) that bilingual education in the United States is in critical need of research in order to document the validity (or otherwise) of its basic psychoeducational assumptions. The urgency for such documentation is highlighted by the growing sociopolitical backlash against bilingual education which can be illustrated by the following quotation from an article by Tom Bethell (1979:30) entitled 'Against bilingual education: Why Johnny can't speak English':

Bilingual education is an idea that appeals to teachers of Spanish and other tongues, but also to those who never did think that another idea, the United States of America, was a particularly good one to begin with, and that the sooner it is restored to its component 'ethnic' parts the better off we shall all be. Such people have been welcomed with open arms into the upper reaches of the federal government in recent years, giving rise to the suspicion of a death wish.

Teachers of minority language children who are committed to bilingual education are frequently confronted with similar negative views from fellow teachers and school administrators who may feel threatened by the expansion of bilingual education. Fears of bilingual education tend to be rationalized in both sociopolitical and psychoeducational terms; the sociopolitical argument, articulated by Bethell as well as in many articles in the popular press (e.g. New York Times editorial, November 22, 1976) is that bilingual education will promote social fragmentation and Quebec-style separatist movements. The psychoeducational argument is that if minority children are deficient
in English, then they need instruction in English, not their first language (L1). The alternative argument, for bilingual education, rests on the counter-intuitive assumption that instruction in L1 will promote English skills more effectively than instruction in English. It is not surprising that this 'Less equals more' rationale would be difficult both for proponents to articulate and for opponents to swallow.

The apparent counter-intuitive nature of the psychoeducational argument makes it all the more imperative to supply unequivocal empirical evidence for its validity. Bilingual education is tolerated in the United States only on psychoeducational grounds. If evidence for the validity of the psychoeducational assumptions underlying bilingual education is not forthcoming, it is likely that policy decisions will be taken solely on the basis of sociopolitical considerations. Given the present climate, the sociopolitical argument for bilingual education, i.e. the desirability of a culturally pluralistic society (see, for example, Fishman 1976, Kjolseth 1972), would carry very little weight compared to the fear of social fragmentation.

The fact that evidence from the few program evaluations that were reasonably well controlled does appear to support bilingual education (see, for example, Troike 1978) is counterbalanced by the fact that there is as yet no clear evidence that bilingual education is reducing inequality of educational opportunity on the large scale that was originally envisaged. Despite the shortcomings of the AIR study (Danoff 1978) in design (see, for example, O'Malley 1978, Swain 1979), there is no doubt that the negative tone of its findings contributed to the widespread confusion about the goals and methods of bilingual education at all levels of the educational hierarchy, from policy-makers to classroom teachers.

However, the roots of the confusion regarding the psychoeducational rationale for bilingual education lie not so much in the lack of research documenting the effects of bilingual education, as in the real conceptual confusion which underlies the rationale for transitional programs. In fact, there is an enormous amount of well-controlled research documentation about bilingual education both in the United States and elsewhere (see Engle 1975). However, the invalid a priori assumptions with which the research is approached often make the findings look contradictory. For example, much of the impetus for the development of bilingual education in the United States derived from the 'linguistic mismatch' hypothesis that mismatch between the language of the home and the language of the school leads to retardation in the acquisition of reading and other academic skills (Downing 1978, UNESCO 1953). The fact that this assumption is contradicted by the findings of immersion programs in Canada and elsewhere (see Cummins 1979a, Swain 1979, for reviews) casts doubt on the entire psychoeducational rationale for bilingual education (see Epstein 1977).
This paper is an attempt to clarify the theoretical underpinnings of bilingual education. I argue that there is a very good reason why educators should be confused about the rationale for bilingual education as it is currently implemented in the United States; the reason is that the psychoeducational assumptions underlying transitional programs are largely invalid. This assertion is based on three considerations: first, the assumptions of transitional bilingual education suffer from internal logical inconsistencies; second, the 'linguistic mismatch' hypothesis which supplies the rationale for providing initial instruction in L1 is contradicted by considerable research evidence; third, research findings suggest that the educational benefits of bilingual education may be cumulative, and thus, aborting the program at an early stage is unlikely to realize these benefits.

These logical and empirical problems in the psychoeducational assumptions underlying transitional bilingual education all stem from a failure to conceptualize adequately the construct of language proficiency and its cross-lingual dimensions. In other words, there has been relatively little inquiry into what forms of language proficiency are related to the development of literacy skills in school contexts and how the development of academic proficiency in L1 relates to the development of academic proficiency in L2. The invalidity of the assumptions underlying transitional bilingual programs can be illustrated by a consideration of these two issues.

Cognitive/academic language proficiency. Oiler (see Oiler 1978, 1979; Oiler and Perkins 1978) has argued on the basis of a large number of studies that 'there exists a global language proficiency factor which accounts for the bulk of the reliable variance in a wide variety of language proficiency measures' (1978: 413). This factor is strongly related to IQ and to other aspects of academic achievement. Most of the data reported by Oiler and Perkins involved performance on discrete-point measures of literacy-related skills (for example, vocabulary and reading comprehension tests) or on integrative tests such as oral and written cloze and dictation. Farhady (1979) has shown that there is no difference between discrete-point and integrative tests in terms of their loadings on a global proficiency factor.

Oiler's general position is supported by a large body of research showing high correlations between literacy skills and general intellectual skills. Verbal intellectual skills are more strongly related to reading than are nonverbal skills. For example, Strang (1945) reported correlations of .41-.46 between nonverbal abilities and reading, and of .80-.84 between verbal abilities and reading. Consistent with these empirical findings, several theorists have emphasized the importance of reasoning in the reading process (Downing 1979, Singer 1977, Vernon 1971), while others (for example, Goodman, Goodman, and
Flores 1979; Smith 1971) have pointed out that fluent reading skills require that readers make use of their total knowledge of language and of the world to make predictions about information in the text.

However, it is clear that not all aspects of language proficiency are related to cognitive and literacy skills. For example, with the exception of severely retarded and autistic children, everybody acquires basic interpersonal communicative skills (BICS) in a first language, regardless of IQ or academic aptitude. As Chomsky (1965) has pointed out, the phonological, syntactical, and lexical skills necessary to function in everyday interpersonal contexts are universal across native speakers. There are individual differences in the ways in which native speakers manifest these linguistic skills in interpersonal communicative contexts, e.g. oral fluency, but for the most part these differences are not strongly related to cognitive or academic performance. Thus, I prefer to use the term 'cognitive/academic language proficiency' (CALP) in place of Oller's 'global language proficiency' to refer to the dimension of language proficiency that is strongly related to literacy skills.

It is possible to present diagrammatically the distinction between CALP and BICS by adapting Roger Shuy's (1976) 'iceberg metaphor.' In Figure 1, the 'visible' language proficiencies of pronunciation, vocabulary, grammar, which are manifested in everyday interpersonal communicative situations, are above the surface, but the cognitive/academic language proficiency required to manipulate or reflect upon these surface features outside of immediate interpersonal contexts is below the surface, and, I argue, has usually been ignored in policy decisions regarding language of instruction.

Figure 1. The 'iceberg' representation of language proficiency.
Distinctions similar to that between CALP and BICS have been made by several investigators. Hernández-Chávez, Burt, and Dulay (1978), and Burt and Dulay (1978), for example, distinguish between 'natural communication' tasks and 'linguistic manipulation' tasks which, they report, 'give quite different results in terms of the quality of the language produced' (Hernández-Chávez et al. 1978:52). Burt and Dulay (1978:184) define this distinction as follows:

A natural communication task is one where the focus of the student is on communicating something to someone else—an idea, some information, or an opinion in a natural manner ... On the other hand, a linguistic manipulation task is one where the focus of the student is on performing the conscious linguistic manipulation required by the task.

Burt and Dulay regard linguistic manipulation tasks as primarily assessing metalinguistic awareness, although the decontextualized noncommunicative tasks such as oral and written cloze, sentence repetition, dictation, etc., that they include in this category would not usually be regarded as measures of metalinguistic awareness. In terms of the present framework, metalinguistic awareness is regarded as one specialized aspect of CALP. Several studies have reported that development of metalinguistic skills is significantly related to overall cognitive development (see Ryan and Ledger 1979 for a review).

A similar distinction to that proposed by Burt and Dulay (1978) has been noted by Krashen (1978) in discussing the 'Words in sentences' subtest of the Modern Language Aptitude Test (Carroll and Sapon 1959). Krashen notes (1978:9) that this subtest involves 'a conscious awareness of language and grammar, quite different from the tacit knowledge or "competence" Chomsky (1965) claims all native speakers have of their language'. Further evidence for the distinction comes from the finding that the oral language production skills of preschoolers are only weakly related to the later acquisition of reading skills in school (Wells 1979). The CALP-BICS distinction is also parallel to the distinction which Olson (1977) makes between the social and ideational functions of language and Halliday's (1975) distinction between pragmatic and mathetic functions of speech.

There is also clear evidence for the CALP-BICS distinction in L2 contexts (see Cummins 1980a, 1980b), although it may not be apparent in the initial stages of L2 acquisition. For example, Skutnabb-Kangas and Toukomaa (1976) report that although parents, teachers, and the children themselves considered Finnish immigrant children's Swedish to be quite fluent, tests in Swedish which required cognitive operations to be carried out showed that this surface fluency was not reflected in the cognitive/academic aspects of Swedish proficiency.
Another illustration comes from Fillmore's (1979) one-year longitudinal study of five Spanish-speaking kindergarten children learning English. There was considerable variation in the extent to which the children sought out the company of English speakers and desired to identify with them. After three months of exposure to English, the most social and outgoing child, Nora, had learned more English than two of the others would learn by the end of the year. Fillmore (1979:221) argues that 'the secret of Nora's spectacular success as a language learner can be found in the special combination of interests, inclinations, skills, temperament, needs, and motivations that comprised her personality'. She suggests (1979:227) that the differences between the five children in rate of English communicative skills acquisition 'presumably had nothing to do with intellectual or cognitive capacity'. Thus, we would not necessarily expect Nora to surpass the other children to the same extent in development of English literacy skills, since overall cognitive abilities appear to underlie these to a greater extent than personality variables. In a similar way, IQ has been found to be largely unrelated to the acquisition of L2 communicative skills in French immersion programs (see Genesee 1976).

In summary, there exists a reliable dimension of language proficiency which is strongly related to literacy and to other decontextualized verbal–academic tasks. This dimension of cognitive/academic language proficiency appears to be largely independent of these language proficiencies which manifest themselves in everyday interpersonal communicative contexts. These latter forms of language proficiency are either universal across native speakers or unrelated to cognitive/academic skills.

Interdependence of CALP across languages. Oller does not consider in detail the question of whether his global language proficiency factor underlies an individual's performance in different languages. In fact, the entire question of how the development of L1 proficiency relates to the development of L2 proficiency has received little attention until recently in the context of bilingual education. However, it has been hypothesized that the cognitive/academic aspects of L1 and L2 are interdependent and that the development of proficiency in L2 is partially a function of the level of L1 proficiency at the time when intensive exposure to L2 begins (Cummins 1979a; Skutnabb-Kangas and Toukomaa 1976). In other words, previous learning of literacy-related functions of language (in L1) will predict future learning of these functions (in L2). This interdependence hypothesis is illustrated in Figure 2.

Figure 2 expresses the point that despite the obvious differences between L1 and L2 in terms of the surface features of phonology, syntax, and lexicon, there is a common underlying proficiency that determines an individual's performance on
cognitive/academic tasks (e.g. reading) in both L1 and L2. The dual-iceberg diagram also allows for the possibility that there may be nonsurface aspects of proficiency in each language that are not interdependent and that may not be related to CALP.

Figure 2. The 'dual-iceberg' representation of bilingual proficiency.

In this respect it is useful to distinguish, as Genesee (1979) does, between language-specific skills and more general aspects of language proficiency. Genesee (1979:74-75) suggests that

One might expect the language-specific skills (those which are not easily transferable from language to language) to include the more technical aspects of language, such as spelling patterns or syntactic rules, whereas the transferable skills may be more in the nature of cognitive processes, such as the use of one's knowledge of the syntactic transitional probabilities of a language in reading.

Genesee's (1979) discussion is related only to transfer of reading skills but some sociolinguistic rules may also be language-specific.

It is important to note that although language-specific skills may not be easily transferable across languages, there may be high correlations between language-specific skills (e.g. L1 spelling and L2 spelling) if CALP underlies an individual's acquisition of these skills in each language. In general, also, one would expect proficiency in languages that are similar to be more highly correlated than proficiency in languages that are dissimilar.
Also, the hypothesized interdependence between L1 and L2 does not exist in an affective or experiential vacuum and there are several factors which might reduce the relationship between L1 and L2 measures of CALP in comparison to those between intralanguage (L1-L1, L2-L2) measures. For example, when motivation to learn L2 (or maintain L1) is low, CALP will not be applied to the task of learning L2 (or maintaining L1). The interdependence hypothesis also presupposes adequate exposure to both languages.

Empirical support for the interdependence hypothesis comes from correlational studies, studies on the 'optimal age' question in L2 acquisition, and evaluations of bilingual education programs for both minority and majority language students.

Correlational studies. If L1 and L2 CALP are manifestations of a common underlying proficiency, it would be predicted that L2 CALP will be significantly related to measures of L1 CALP and each will show a similar pattern of correlations with other variables such as verbal and nonverbal ability. Evidence supporting this prediction from nine recent studies is presented in Cummins (1979b). In these studies the correlations between L1 and L2 CALP ranged from .77 to .42, with the majority in the range .6 to .7. In addition, L1 and L2 showed a very similar pattern of correlations with language aptitude and IQ variables. For example, the relationships between both L1 and L2 and verbal IQ or language aptitude measures were, for the most part, in the .6 to .7 range, while those between L1 and L2 and nonverbal IQ tended to be in the .4 to .5 range.

Age and L2 acquisition. The interdependence hypothesis would predict that older L2 learners, whose L1 CALP is better developed, will acquire cognitive/academic L2 skills more rapidly than younger learners. Recent reviews of research on the age issue confirm this prediction (Cummins 1980c, 1980d; Ekstrand 1978; Genesee 1978; Krashen, Long, and Scarcella 1979). In no study did younger learners acquire L2 CALP more rapidly than older learners. No advantage for older learners in acquiring L2 BICS would be predicted on the basis of the interdependence hypothesis. The research shows no clear trend in aspects of L2 proficiency directly related to communicative skills, such as oral fluency, phonology, and listening comprehension. In some studies older learners display an advantage, whereas in others younger learners perform better. A variety of factors might affect rate of acquisition of L2 communicative skills (see Cummins 1980c; Genesee 1978; Krashen et al. 1979). However, the consistency of the findings in relation to L2 CALP acquisition strongly suggests that level of L1 CALP is a major determinant.
Bilingual program evaluations. The success of French immersion programs for majority language anglophone children in Canada and elsewhere is well documented (see Cummins 1979a, Swain 1978) and need not be considered in detail. Briefly, evaluations have consistently shown that children instructed mainly through French (L2) in the early grades suffer no adverse academic or cognitive consequences and catch up with regular program comparison groups in English language skills shortly after formal English language arts is introduced (usually about grade 2 or 3). Many investigators have remarked on the rapid transfer of reading skills from French to English (for example, Genesee 1979, Lambert and Tucker 1972).

Immersion programs in other contexts show very similar results (see Cohen and Swain 1976, Cummins 1977a). For example, Macnamara's (1966) study of bilingualism in Irish primary education shows that using Irish as a major medium of instruction for children whose L1 is English results in higher achievement in Irish at no cost to achievement in English (see Macnamara 1966:101, Table 11.1). Macnamara's findings have been frequently misinterpreted as support for the linguistic mismatch hypothesis (see Downing 1978; see Cummins 1977b, 1978 for discussion of Macnamara's results).

The findings from immersion programs are sometimes regarded as inconsistent with findings that, for many groups of minority language children, instruction through L1 is more effective in promoting literacy skills in both L1 and L2 than instruction through L2 (see Cummins 1979a). However, the inconsistency disappears when the data are viewed within the context of the interdependence hypothesis, rather than in terms of homeschool language switching, or linguistic mismatch.

Many evaluations of L1-medium or bilingual education programs for minority language children demonstrate a very similar transfer of language skills across languages to that observed in immersion programs. For example, several studies involving minority francophone students in Canada show that instruction through French (L1) is just as effective in promoting English proficiency as instruction through English. Carey and Cummins (1979) reported that grade 5 children from French-speaking home backgrounds in the Edmonton Catholic school system bilingual program (80 percent French, 20 percent English, from K-12) performed at an equivalent level in English skills to anglophone children of the same IQ in either the bilingual or regular English programs. A similar finding is reported in a large-scale study carried out by Hébert et al. (1976) among grades 3, 6, and 9 francophone students in Manitoba. At all grade levels there was a significant positive relationship between percentage of instruction in French and French achievement, but no relationship between percentage of instruction in French and English achievement. In other words, francophone students receiving 80 percent instruction in French and
20 percent instruction in English did just as well in English as students receiving 80 percent instruction in English and 20 percent in French.

The findings of a longitudinal evaluation of the bilingual program for Navajo students at Rock Point (Rosier and Farella 1976), in which all initial literacy skills were taught in Navajo, showed that by grades 5 and 6, students were performing at the national U.S. norm in English reading. Prior to the institution of the bilingual program, students at Rock Point were two years below the norm in English reading despite intensive ESL instruction in the school. Troike (1978) has reviewed findings from other bilingual programs in the United States which showed that minority students performed as well or better in English skills as compared to students in English-only programs, and examples continue to multiply (for example, Legaretta 1979).

The evaluation of a recent 'language shelter' program for Finnish immigrant children in Sodertalje, Sweden, reports findings very similar to those of the Rock Point Navajo evaluation. The extremely poor academic performance of Finnish L1 children in Swedish-only schools has been documented by Skutnabb-Kangas and Toukomaa (1976). The Sodertalje program, however, used Finnish as the exclusive language of instruction in the first two years of school and Swedish was gradually introduced in the third year. In subsequent years Swedish became the main language of instruction but teaching of Finnish was continued throughout the school. By grade 6, children's performance in this program in both Finnish and Swedish was almost at the same level as that of equivalent Swedish-speaking children in Finland, which was a considerable improvement in both languages compared to their performance in Swedish-only programs (Hanson 1979).

In these programs for minority language children, as well as in immersion programs for majority children, instruction through the minority language has been effective in promoting proficiency in both languages. These findings support the following formulation of the interdependence hypothesis:

To the extent that instruction in L_X is effective in promoting cognitive/academic proficiency in L_X, transfer of this proficiency to L_Y will occur provided there is adequate exposure to L_Y (either in school or environment) and adequate motivation to learn L_Y.

In summary, two main points have been made: (1) CALP is a reliable dimension of individual differences in decontextualized literacy-related functions of language which appears to be distinct from interpersonal communicative skills in L1 and L2; (2) L1 and L2 CALP are interdependent, i.e. manifestations of a common underlying proficiency. The immediate psychoeducational implication of these hypotheses for bilingual education
is that, for either minority or majority language students, instruction through a minority language will be just as effective as, or more effective than, instruction through the majority language in promoting literacy skills in the majority language. Much of the current confusion about the rationale for bilingual education (among supporters and opponents alike) stems from a failure to grasp this point.

Misconceptions underlying English-only and transitional bilingual programs. The psychoeducational assumptions underlying arguments both for English-only and transitional bilingual programs for minority children reveal a failure to consider the cognitive/academic proficiency underlying the acquisition of literacy in L1 and L2. Naturally, the cross-lingual dimensions of this proficiency are also ignored.

The Separate Underlying Proficiency model of bilingualism. Those who argue for English-only programs on psychoeducational grounds implicitly assume the validity of a Separate Underlying Proficiency (SUP) model of bilingual proficiency. They usually assume a direct link between amount of exposure to English in school (and home) and achievement in English literacy. It follows that instruction in L1 will result in lower levels of L2 proficiency than instruction in L2. The SUP model is illustrated in Figure 3.

Figure 3. The Separate Underlying Proficiency (SUP) model of bilingualism.
Two interrelated misconceptions about bilingualism can be illustrated with reference to Figure 3. First is the 'balance effect' hypothesis (Macnamara 1966), which assumed that there was only so much linguistic capacity available and therefore sharing it between two languages would lead to lower levels of proficiency in each compared to unilingual speakers. It can be seen in Figure 3 that as one of the bilingual's 'linguistic balloons' gets inflated, less room is left for the other. The second misconception is that the two 'balloons' or sets of linguistic abilities are separate. Therefore, stimulation of one implies that the other is not being stimulated and will consequently decline in relation to the language ability of unilingual speakers of that language.

Two examples illustrate how the 'common sense' assumptions of the SUP model get expressed at both a policy and classroom level. The first example is taken from Bethell's article (1979: 32-33), where he approvingly quotes Congressman John Ashbrook's opposition to bilingual education:

The program is actually preventing children from learning English. Someday somebody is going to have to teach those young people to speak English or else they are going to become public charges. Our educational system is finding it increasingly difficult today to teach English-speaking children to read their own language. When children come out of the Spanish-language schools or Choctaw-language schools which call themselves bilingual, how is our educational system going to make them literate in what will still be a completely alien tongue ...?

The second example illustrates the way the SUP assumptions often operate subtly in school contexts. It is drawn from an ongoing study in which the psychological assessments of over 400 minority language children from a large urban school system in Canada are being analyzed (Cummins 1980b).

The case of Maria. Maria (not child's real name) was referred for psychological assessment by her first grade teacher, who noted that she has difficulty in all aspects of learning. Maria was given both speech and hearing and psychological assessments. The former assessment found that all structures and functions pertaining to speech were within normal limits and hearing was also normal. The findings were summarized as follows: 'Maria comes from an Italian home where Italian is spoken mainly. However, language skills appeared to be within normal limits for English.'

The psychologist's conclusions, however, were very different. On the Wechsler Preschool and Primary Scale of Intelligence (WPPSI), Maria obtained a verbal IQ of 89 (23rd percentile) and a performance IQ of 99 (47th percentile). The
full-scale IQ was 93 (32nd percentile). The report to Maria's teacher read as follows:

Maria tended to be very slow to respond to questions, particularly if she were unsure of the answers. Her spoken English was a little hard to understand, which is probably due to poor English models at home (speech is within normal limits). Italian is spoken almost exclusively at home, and this will be further complicated [emphasis added] by the coming arrival of an aunt and grandmother from Italy.

There is little doubt that Maria is a child of low average ability whose school progress is impeded by lack of practice in English. Encourage Maria's oral participation as much as possible, and try to involve Maria in extra-curricular activities where she will be with her English-speaking peers.

The implicit message to the teacher is clear: Maria's communication in L1 with parents and relatives detracts from her school performance, and the aim of the school program should be to expose Maria to as much L2 as possible in order to compensate for these deficient linguistic and cultural background experiences. There is absolutely no evidence either in the psychological assessment or in the literature (see, for example, Yee and LaForge 1974, Ramirez and Politzer 1976) to support these assumptions, yet they are communicated to the teacher as though they were 'scientifically' proven (e.g. 'There is little doubt ...').

In summary, the 'common sense' assumptions of the SUP model are widely believed at all levels of the educational hierarchy, despite the fact that they are patently false. Among the hundreds of evaluations of bilingual programs for both minority and majority language children carried out all over the world during the past 20 years, I know of none which provides any support for such a model. The pattern of results revealed in a large majority of these evaluations is one where there is a significant relationship between amount of instructional time through the minority language and achievement in the minority language, but no relationship between amount of instructional time through the majority language and achievement in that language. The main problem in the SUP model is that it focuses on the obvious differences between L1 and L2 in surface forms (phonology, syntax, lexicon) and ignores the more critical cognitive/academic language proficiency that underlies successful literacy development, whether instruction is in L1 or L2. Failure to take account of the common proficiency underlying literacy development in both L1 and L2 is also evident in the linguistic mismatch hypothesis which provides much of the rationale for transitional bilingual education.
The logic of transitional bilingual education. The failure of L2-only programs to promote L2 literacy skills effectively among some groups of minority language children was interpreted by many academics as support for the hypothesis that mismatch between the language of the home and the language of the school is a major cause of academic retardation among minority children (see Downing 1978, John and Horner 1971, UNESCO 1953, United States Commission on Civil Rights 1975). This 'linguistic mismatch' hypothesis is exemplified in the well-known UNESCO statement that 'it is axiomatic that the best medium for teaching a child is his mother tongue' (UNESCO 1953:11).

Linguistic mismatch. The linguistic mismatch hypothesis implies that in order to reverse minority children's school failure, initial instruction should be in the child's dominant language. The focus on initial mismatch gives rise to a transitional form of bilingual education in which children are switched to an L2-only program when they are assumed to have acquired sufficient L2 proficiency to benefit from instruction through that language.

As pointed out previously and by other investigators (Bowen 1977, Tucker 1977), the success of immersion programs suggests that the linguistic mismatch hypothesis provides a very insecure psychoeducational foundation upon which to construct the edifice of bilingual education. In terms of the dual-iceberg model (Figure 2), the mismatch hypothesis focuses on L1-L2 mismatch in terms of the 'visible' surface forms and either ignores the underlying conceptual proficiencies which are critical for learning to read (see, for example, Downing 1979), or else implicitly assumes that they are separate for each language. The immersion findings suggest that 'surface' linguistic mismatch becomes an important factor only when it is accompanied by mismatch between children's input CALP and the school program. In summary, one of the basic psychoeducational assumptions of transitional bilingual education appears to have little validity as a general theoretical principle and shows an inadequate conceptualization both of the construct of 'language proficiency' and its cross-lingual dimensions.

Internal logic. The inconsistent internal logic of transitional bilingual education similarly points towards a poorly conceived program. On the one hand, it is assumed that bilingual instruction in the early grades will be more effective in raising the level of English proficiency of limited- or non-English proficient (LEP and NEP) students than instruction through the medium of English only. In other words, less time through the medium of English will result in greater development of the English language skills underlying literacy. In terms of Figure 3, the assumption is that inflating the L1 balloon will simultaneously succeed in inflating the L2 balloon to a greater extent than if attempts were made to inflate only the L2 balloon. In other words, in the initial grades the SUP model is rejected
in favor of a Common Underlying Proficiency (CUP) model such as that illustrated in Figure 4. In the CUP model, experience with either language can, theoretically, promote the development of the proficiency underlying both languages, given adequate motivation and exposure to both, either in school or wider environment.

Figure 4. The Common Underlying Proficiency (CUP) model of bilingualism.

Within the context of the CUP model, transitional programs assume that because the L2 channel is initially restricted, instruction in the early grades should be through the L1 channel. However, as soon as the L2 channel has expanded sufficiently, all instruction should be given in English in order to promote fully the development of English proficiency by maximizing exposure to English instruction. In other words, despite the implicit endorsement of a CUP model in the early grades, transitional programs revert to a SUP model by assuming (without any evidence) that children's English skills will not develop adequately unless they are mainstreamed to an English-only program. If it were assumed that English skills would continue to develop adequately in a bilingual program, then there would be no psychoeducational justification for aborting the promotion of L1, especially in view of the considerable funds currently being expended in the United States on foreign language teaching (President's Commission 1979).
The extent of the logical contradiction involved in the mainstreaming process can be seen in the fact that minority students in the early grades of transitional programs are expected to make so much progress in the cognitive/academic skills underlying English literacy that after two or three years they should be at a level where they can compete on an equal footing with their unilingual English-speaking peers who have had all their instruction in English. The findings reviewed in the present paper suggest that this basic 'less equals more' expectation is realistic; what is not realistic, however, is the time frame. The data suggest that 'equality' of academic potential and performance is not attained until the later grades of elementary school. Many minority students will be fluent in English prior to that time and may qualify to exit from a bilingual program on the basis of a 'natural communication' task such as the Bilingual Syntax Measure or the Basic Inventory of Natural Language. However, as emphasized earlier, fluency in English BICS does not necessarily imply commensurate proficiency in English CALP. The evidence reviewed in the next section suggests that rate of growth in English CALP in bilingual programs accelerates in the later grades of elementary school.

Cumulative benefits. A considerable body of recent evidence, again from both minority and majority situations, suggests that in its effort to avoid the taint of cultural pluralism, transitional bilingual education may also deny minority children the opportunity to reap the educational benefits of their bilingualism. As outlined earlier in this paper, there is no logical psycho-educational reason to assume that bilingual instruction will be any less effective in promoting the cognitive/academic proficiency underlying English literacy in the later grades of elementary school than it is assumed by transitional programs to be in the early grades. In fact, as Troike (1979) points out, several longitudinal evaluations (Gonzalez 1977, Leyba 1978, Rosier and Farella 1976) suggest that the full benefit of bilingual instruction may not become apparent until the fifth or sixth year of instruction. In these evaluations, students in the bilingual program reached national grade-level norms in English reading only in the fifth grade. As outlined earlier, the Sodertalje program for Finnish immigrant children in Sweden (Hanson 1979) showed a similar pattern of cumulative growth in L2 proficiency.

Several 'enrichment' bilingual programs for majority language children also show a trend for achievement gains in majority language literacy skills to become apparent in the later grades of elementary school. For example, students in French immersion programs in Ontario have consistently performed significantly better than comparison groups in aspects of English language skills in grades 5 and 6 (see Swain 1978). Recent findings from the longitudinal evaluation of a Ukrainian-English
bilingual program in Edmonton, Alberta, also show that the bilingual students in grade 5 perform significantly better than the comparison groups, despite 50 percent less instructional time through the medium of English. In previous grades no significant group differences were observed in English language skills (Edmonton Public School Board 1979).

These findings of cumulative advantages as a result of bilingual education are consistent with the 'threshold' hypothesis (Cummins 1979a) that there may be threshold levels of bilingual proficiency which bilingual children must attain both in order to avoid cognitive/academic deficits and to allow the potentially beneficial aspects of becoming bilingual to influence their cognitive/academic growth. The research findings reviewed in Cummins (1979a) suggest that cognitive/academic benefits accrue to students who reach a 'higher threshold' level of bilingual proficiency, i.e. high levels of proficiency in both languages. The fact that students in bilingual programs begin to pull ahead of comparison groups in the later grades of elementary school, when literary skills in both languages have become well established, is clearly consistent with the threshold hypothesis.

Conclusion. The failure of the Separate Underlying Proficiency model and of the linguistic mismatch hypothesis to account for the research findings, as well as the logical confusion in the rationale for transitional bilingual programs, derive from a failure to conceptualize adequately the nature of language proficiency underlying literacy skills. These theoretical approaches focus on obvious differences between languages in surface forms, while ignoring the common conceptual basis for the development of literacy skills in L1 and L2. The Common Underlying Proficiency model, on the other hand, is capable of accounting for the research findings from both majority and minority language bilingual situations because of its emphasis on the interdependence between the cognitive/academic language proficiencies underlying L1 and L2 literacy skills.

An immediate educational implication is that the entire mainstreaming endeavor in transitional bilingual programs is based on an a priori assumption that is not only inconsistent with the initial assumptions of transitional programs but is also contradicted by a mass of research evidence. Evaluations of bilingual programs involving both majority and minority language groups from many parts of the world show clearly that there is no educational support for the assumption that children should be switched to a majority language program in order to develop adequate literacy skills in the majority language. In fact, many longitudinal evaluations of bilingual programs show that the rate of growth in majority language literacy skills increases substantially in the later grades of elementary school, with the result that children in the bilingual
program often perform better in majority language literacy skills than comparison groups of children in unilingual programs, despite considerably less instructional time through that language.

What should be the role of research in the present United States bilingual education context? The implication of the analysis in the present paper is that research should be directed towards clarifying the development of bilingual cognitive/academic proficiency rather than towards facilitating the implementation of a program which represents a compromise between faulty psychoeducational considerations (the linguistic mismatch hypothesis), on the one hand, and faulty sociopolitical considerations (the social fragmentation hypothesis) on the other. This compromise has given rise to the requirement that minority children be mainstreamed to English-only programs as soon as possible, a requirement that is not only subject to enormous practical difficulties, but is also logically inconsistent and directly contrary to the research evidence. Researchers engaged in developing entry and exit criteria for transitional programs should consider the fact that their findings may be used to ensure mediocrity of educational opportunity for minority children. The educational difficulties of minority children will be alleviated only when educators stop thinking in terms of the minimum adaptations of school systems required to provide equal educational opportunity and start thinking instead of optimizing educational opportunity by continuing to promote literacy skills in both L1 and L2. The psychoeducational basis for this type of program can be found in the Common Underlying Proficiency model of bilingualism, while resourceful administrators may be able to find both the necessary sociopolitical and financial support in the recommendations of the President's Commission on Foreign Language and International Studies (1979).

NOTES

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1. Shuy's use of the iceberg metaphor is principally to illustrate the fact that the visible features of language which are assessed by most tests are not necessarily those that are most critical. He suggests that the less visible dimensions of semantic and functional meaning are critical for language functioning but are seldom assessed. The emphasis in the present paper is clearly different from Shuy's, but the two approaches are not necessarily contrary if CALP is viewed as one aspect of semantic and functional meaning.

2. My discussions of Macnamara's findings regarding the achievement in Irish (L2) of children in Irish immersion programs (Cummins 1977b, 1978) erred in accepting Macnamara's interpretation that differences in favor of the immersion group
were not educationally significant. In fact, the immersion group performs as well in Irish as native Irish speakers and significantly better than comparison groups of children in less intensive Irish programs. Macnamara's dismissal of these significant differences is based on the fact that supplementary analyses showed that instruction through Irish is not significantly related to achievement in Irish in areas where there is a greater amount of Irish used in the environment (the west of Ireland), although the relationship between Irish achievement and amount of instruction through Irish remains significant in areas where English is used almost exclusively outside school. This pattern of results is precisely what would be predicted on the basis of the present analysis of bilingual program evaluations.

3. It is beyond the scope of the present paper to consider the student input by educational treatment interactions that result in varying academic outcomes for minority language children. These have been considered in Cummins (1979a, 1980a). There appear to be complex interactions between sociocultural, psychoeducational, and school program variables in determining outcomes. However, there is no evidence, as assumed in the linguistic mismatch hypothesis, that minority children who are dominant in L2 should be educated through L2. This strategy ignores the 'cultural mismatch' variable and denies children the opportunity to develop a cognitively and academically beneficial form of bilingualism (see Cummins 1979a).

4. The CUP model illustrated in Figure 4 embodies the same assumptions as the 'dual-iceberg' model in Figure 2. The two illustrations, however, permit different aspects to be highlighted. Specifically, the dual-iceberg model illustrates the distinction between surface and underlying dimensions of language proficiency, whereas the CUP model allows the instructional component to be illustrated by means of the 'balloon inflation' metaphor.

5. Obviously, the main reasons for mainstreaming children out of bilingual programs are sociopolitical, but it is important to expose the psychoeducational contradictions in this policy since mainstreaming is often rationalized in psychoeducational terms.

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THE LANGUAGE MINORITY CHILD: 
A PSYCHOLOGICAL, LINGUISTIC, AND SOCIAL ANALYSIS

Edward A. De Avila
Sharon E. Duncan
De Avila, Duncan and Associates, Inc.

The past decade has witnessed a renewed interest in the study of bilingualism. Federal involvement in the provision of compensatory services for the language minority child has produced a plethora of programs which have been widely criticized and attacked. Unfortunately, however, there is a dearth of empirical research upon which to judge, and one finds that the debate rages on with respect to how the language minority child should be characterized and treated. The purpose of this paper is to review the highlights and number of recent investigations in which nine different ethnolinguistic groups were examined across a number of dimensions thought to be important in understanding the character of the language minority child in the schools.

The data discussed here derive from a three-year study conducted by the Southwest Educational Development Laboratory (SEDL) under the direction of Edward De Avila and Sharon Duncan. The study was funded by the National Institute for Education. We are going to describe the overall approach and the data base from which the present summary is taken. It should be borne in mind that space limitations are such that it is possible to present only the barest details. A book which integrates the results of the total effort is currently under preparation.

Introduction to the studies. The study of language minority students in the United States has varied greatly, depending on the perspective and purpose of the investigation. To a large extent these differences in perspective can be seen as a function of a discipline (i.e. anthropological vs. psychological), method (observation vs. experimental), and unit of analysis
(group vs. individual). Within the present context, and in order to facilitate discussion, however, it seems reasonable to characterize the study of the language minority child as consisting of four basic approaches: (1) antecedent conditions, (2) individual differences, (3) intellectual development, and (4) perceptions. We briefly mention a number of points concerning each of these approaches as a way of introducing the present study.

Antecedent conditions. In any study which purposes to understand or to investigate the sources of low achievement among language minority students, much attention has been given to the study of personality and behavioral characteristics thought to result from different and/or limited environmental experiences.

Early studies of the academic achievement of Mexican-American and other Hispanic students were generally conducted in conjunction with studies on black Americans, under the rubric of culturally disadvantaged (e.g. Horn 1970; Deutsch, Katz, and Jensen 1968). These efforts, while well intentioned, were guided by the proposition that viewed minority children in general as culturally deprived. Thus, the argument ran that because minority children were subject to poor and unstimulating environments, they were likely to be retarded in their linguistic, cognitive, and social development.

A more liberal—but nonetheless ultimately negative—view is one which describes the Hispanic background experience as 'simply different' from that of the mainstream American cultural experience (see Carter 1970). In this view, the culturally different child is one who, coming from a language minority background, does not possess the same values, attitudes, and motivation; has not developed the prerequisite academic skills; may be 'retarded' in language and social development; and in general is considered as 'deviant' from the mainstream.

According to this view, the culturally deprived child is still one who is handicapped not by the school, but by his or her own culture and background. The school is thus the victim since it must take on the additional responsibility of dealing with the presumed 'reluctance to learn' that these children bring to the school (Ogbu 1974).

The culturally disadvantaged and culturally different views both recognize a limited social, cultural, and environmental background of the low achieving minority child. In both approaches, much attention is given to those aspects of socio-cultural and environmental background that correlate with academic achievement. Thus, for example, a significant number of studies are found in the literature which report correlations between family background characteristics and higher academic performance. Such variables as home language, family size, birth order, parental education and occupation, family
composition (e.g. single parent, etc.), and other variables have been found to be 'significant' predictors to school achievement.

Due to the emphasis on group comparisons, the relationship between background variables and achievement is based primarily in the observation that group differences occur concurrently with group differences in achievement. Hence, the tendency has been to infer a causal relationship between family background variables per se and school achievement. This connection is perhaps not as direct as it may appear.

Individual differences. The literature on individual differences with respect to language minority students is fairly recent and has tended to focus on the demonstration of 'between group differences' as a means for identifying or explaining 'cultural differences' which are in turn linked to differences in academic performance. The following provides a brief review of several of the approaches which have been taken in the application of individual difference constructs to the study of language minority students. For more complete discussion there are a number of excellent sources (Anastasi 1958).

Perhaps the most important single study in the present context is Lesser's (1965) study in which significant ethnic differences were found between Chinese, Jewish, black, and Puerto Rican children on tests of mental ability. Since then, there have been numerous similar studies in which differences in ability patterns have been identified. For example, Stewart et al. (1967) found different patterns between given ethnic groups in Hawaii. Similarly, Werner et al. (1968) found differences using four different groups. On the other hand, a significant number of researchers (Sitkei 1966, Burnes 1968, and Stokes 1970) have found that the attribution of these differences to culture and ethnicity were insufficient and that other factors such as SES, SEC, etc., were equally important in explaining the apparent differences. Finally, more recent investigations (Reiss 1972, Leifer 1972, Flaugher and Rock 1972), with black/white, Chinese/black/Italian/Puerto Rican, and black/white/Mexican-American/Asian, respectively, found no evidence consistent with ethnic patterns on test performance.

Spurred by a recent court decision (Lau vs. Nichols), other researchers have attempted to explain apparent ethnolinguistic differences through the application of 'cognitive style' constructs, arguing that differences between groups have led to a disproportionate emphasis on the preferred mode of the mainstream child at the expense of the language minority child. As the term is used in the psychological literature, 'cognitive style' refers to 'individual variations in modes of perceiving, remembering, transforming, and utilizing information' (Kagan 1971, as cited in Cazden and Leggett 1976). Within the sphere of interpersonal and social functioning, these 'preferred modes' are believed to exist as 'traits' which describe consistent
behavioral predispositions across time and situations (see Messick 1976). In the present context, it is important to bear in mind Messick's (1976) distinction between cognitive style and learning style. The former refers to what information has been learned, whereas the latter refers to how this information has been acquired.

The vast array of research on cognitive styles is best represented by the work of Witkin (1954, 1975, 1976, 1977) and his colleagues on field dependence/independence, of Sigel (1965, 1967) on categorization styles, and of Kagan and his colleagues (1960, 1963) on conceptual tempo. These works, in addition to the research of Cole and Scribner (1974), and Guilford (1956) demonstrate significant variations in cognitive and sensory perceptions evidenced by children of different cultural and linguistic groups, and have been addressed by a wide variety of researchers (see Cohen 1979, Berry and Dasen 1971, Cole and Bruner 1971, Witkin and Goodenough 1976, Witkin et al. 1962, and Holtzman et al. 1975).

With respect to the present context, the application of Witkin's (1950) model to educational settings has been particularly significant.

Ramírez, Castañeda, and Herold (1974) have argued that certain aspects of Witkin's theory, with modifications, may be particularly productive in designing 'responsive instructional programs'. Specifically, Ramírez and his colleagues have observed that cognitive style varies with degree of assimilation to the Anglo cultural mainstream (Ramírez, Herold, and Castañeda 1975; Ramírez and Price-Williams 1974), and that children who can cope effectively with the demands of two cultures display 'bicognitivity'--a concept somewhat akin to the sociolinguistic concept of 'code-switching'. Thus, in the same way in which many 'bilingual' children 'switch' codes in response to selected linguistic demands of a conversational situation, so the 'bicognitive' child switches cognitive styles according to the different demands of different sociocultural settings.

Because Mexican-Americans in particular have been found to be considerably more field independent that Anglo children (Buriel 1975; Canavan 1969; Kagan and Zahn 1975; Ramírez and Price-Williams 1974; Sanders, Scholz, and Kagan 1976; Kagan and Buriel 1977), field dependence has been used by some to explain academic differences as well as sociocultural differences in child rearing.

Broader examination of the questions raised has only recently generated interest; one finds relatively few studies conducted across multiple groups within the United States wherein field dependence/independence is tied directly to school achievement while factors such as ethnicity, language, socioeconomic status, and other variables are controlled.

Most studies seem to focus on the issue of between-group differences rather than on the impact of cognitive styles on school performance across multiple groups representing
ethnolinguistic differences. Moreover, the concepts used in describing field dependence have not escaped some questioning. One study examining the impact of field dependence on subject's performance (Kagan and Buriel 1977) found, contrary to earlier findings, that difference in competitiveness or cooperation, as suggested by Ramírez et al. (1974), was not predictive of school achievement. Kagan and Buriel (1977) concluded that difference in field dependence may relate more to the cognitive domain than to cooperation and affiliation, which relate more to school interaction style.

Finally, with respect to application of the FD/FI construct to Asian populations, Hsi and Lim (1977:8) have cautioned: 'Though pedagogical approaches based on the field dependent cognitive style might be applicable to Mexican-American students, they should be examined with care when applied to Asian-American students'.

Within the present context, a second important construct, referred to as the construct of 'cognitive tempo', is important. 'Conceptual tempo', as it was originally studied by Kagan, Rosman, Day, Albert, and Philips (1964), refers to the tendency of children to respond to problem-solving tasks in either a reflective or an impulsive manner. Operationally, the construct has been defined by the length of time required to make a selection among several possible alternatives in a problem-solving task and the accuracy of that selection. Impulsivity refers to the tendency to make fast decisions and many errors, while reflectivity refers to slow decision times with relative accuracy (Adams 1972). The variables most commonly recorded in tests of impulsivity-reflectivity are latency to first response and number of incorrect choices.

This information-processing strategy seems to vary across children and with age. Reflectives seem to make more efficient use of strategy selection in test situations and to exhibit greater selective attention to relevant cues in problem-solving tasks. Kagan, Pearson, and Welch (1966) have found this response style predictive of a number of errors on inductive reasoning tests. Ault (1973) and others have shown that reflective children seem to show more mature problem-solving strategies, while others (Kagan et al. 1966, and Adams 1972) have found that some children become increasingly reflective with age. An investigation by Adams (1972) of the possibility that conceptual tempo may be 'genotypically distinct' at different ages concluded that while younger (6-year-old) impulsives showed immature problem-solving strategies, both older (8-year-old) impulsive and reflective subjects performed at equally mature problem-solving levels.

Some investigators (Campbell 1973) have tied the conceptual tempo mode of behavior to child-rearing practices. Mothers of impulsive children have lower academic expectations for their children and do not intervene or structure learning situations as much as do mothers of either reflective or clinically
diagnosed hyperactive children. Hyperactive children share some common characteristics with impulsive children, such as short attention spans, greater field dependency, and an inability to inhibit motor movement (Campbell, Douglas, and Morgenstern 1971; Harrison and Nadelman 1972; Hetherington and McIntyre 1975).

In fact, it has also been suggested that 'cognitive impulsivity is one instance of a broader syndrome which includes high motoric activity and short attention span' (Kagan et al. 1964, in Ward 1968). Baer and Wright (1974) also consider the possibility that failure on the part of impulsives to inhibit responses extends beyond the domain of cognition. In a study of motoric inhibition, Harrison and Nadelman (1972) found reflectives better able to inhibit motor movement than impulsives. However, Bucky, Banta, and Gross (1972) reported no such difference.

As recently as 1975, Hetherington and McIntyre referred to a conceptual overlap between field dependence and cognitive tempo. Field independent, in contrast to field dependent, children are less distracted by external cues in problem solving (Massari and Mansfield 1973) and are more able to attend to relevant cues in conservation tasks (Fleck 1972). They also attend relatively more to cues within the task rather than to social cues emitted by the experimenter, such as the experimenter looking at or leaning toward the correct stimuli in a discrimination learning task (Ruble and Nakamura 1972, Hetherington and McIntyre, 1975).

A somewhat similar overlap was reported by Greer and Blank (1977) in a study which examined the relationships between 'cognitive style' ('the tendency to analyze a stimulus into its differentiated components') and conceptual tempo, with self-paced training to increase reflective and analytic strategies.

The pattern of response for the more impulsive would seem to be a quick succession of questions and solutions with very brief periods between each. The more reflective child asks as many questions and offers an equal number of solutions, but intersperses these verbalizations with silent periods, during which he is presumably 'reflecting' (Greer and Blank 1977:312).

Thus, conceptual tempo, like field dependence/independence, has been used to explain individual performance differences in a number of cognitive problem-solving tasks. Unfortunately, the studies of conceptual tempo have been conducted with restricted subject populations and one finds very few studies directed toward language minority populations which go beyond simple, between-group comparisons.

English language proficiency. The effects of oral English language proficiency on school achievement and cognitive
development have not been empirically studied to any great extent. Measures of oral English language proficiency are noticeably absent from studies involving non-English language groups (see De Avila and Duncan 1976, 1979). In fact, the NAEP study of achievement for Hispanic Americans (Crane 1977) notes that many of their questions probably measure English language proficiency, that there were not mechanisms to deal with this problem within the framework of the approach, and that the effect of language proficiency on achievement is not known. Crane concludes (1977:3):

Until proficiency in English is carefully studied, we cannot be sure what English-speaking means. The category English-speaking might include any or all of the following groups: English monolingual, English dominant, bilingual or Spanish dominant.

When language is taken into account, children are usually classified on the basis of more global categories such as English 'dominance', or in terms of whether their native language is English or not. Consequently, a common but meaningless result is that English dominant minority children perform better on English achievement tests than non-English dominant children. The resultant conclusion that the problem is thus language ability is often made, but is not justifiable on the basis of such observations alone.

In part, the data that exist to support this 'intuitive' claim are based on the fact that ethnolinguistically different children show such poor performance in the schools. It naturally follows that part of the problem must be related to English language skills.

While this reasoning is in part true, much confusion abounds with respect to both the meaning and the measurement of English language proficiency (see De Avila and Duncan 1976, 1979). For example, oral English language proficiency is often confused with the concepts of language achievement and language dominance. As a result, so-called English dominant minority children are often used as a criterion group with no measure of English language proficiency. Moreover, determination of language dominance is often based solely on observations and other subjective rating scales (see Denker 1977, Gordon 1976, Michel 1971, Rogers and Wright 1969) which are of questionable validity.

English language achievement, on the other hand, is often not distinguished from English language proficiency. For example, language achievement refers to skills learned in a structured setting such as the classroom. To a major extent, the degree of achievement is directly related to the child's exposure to the specific content covered by the test. In contrast, language proficiency refers to the student's language skills in English which are learned in both school and natural
settings. It is more generalizable in that it is not necessarily dependent upon specific instruction or content. Moreover, language achievement is more likely to be dependent upon proficiency than vice versa.

Because of the failure of previous research to clearly distinguish between individual language differences or to include language assessment at all, it is difficult to draw conclusions regarding oral English proficiency and achievement.

Intellectual development. A frequently cited explanation for group differences is the concept of intelligence. The inevitability of this explanation draws its impetus from a belief that between-group differences across intellectually demanding tasks are best characterized by task-bound tests of IQ. Thus, differences in school achievement are presumed to be the results of differences in native intelligence. And, conversely, differences in IQ scores are presumed to be indicative of a lower overall potential for school achievement.

The use of the IQ test has been defended on the basis of its ability to 'predict' achievement scores. Numerous authors have criticized this argument as being circular, since the content of both achievement and IQ test is virtually indistinguishable. In this way the IQ test fails to distinguish background learning experiences (repertoire) from the child's ability to encode or transform information (capacity) within his or her repertoire. Because of this limitation and numerous others, many researchers have turned to less culturally specific assessment approaches.

One such approach derives from the work of Piaget. Since Piaget's work is well known throughout the world, there seems to be little need to present the theory in any detail (Flavell 1963, Furth 1969), nor does there appear to be any need to review the vast cross-cultural literature which has established the theory throughout the world (Dasen 1972). In a review of Piaget's work, Brown (1965) has indicated that the Piagetian approach, although not totally free from cultural impact, 'on the whole ... is nearer the culture-free pole'. Brown cites the work of Wallach (1963), who summarized a large number of studies conducted in North America and Europe and found slight shifts in the age of acquisition but the same sequential order of acquisition of different conservation tasks. Brown also cites Goodnow (1963), who tested European and Chinese children in Hong Kong using conservation of space, weight, and volume, and found no difference in acquisition regardless of level of schooling. 'The most striking result is the very real and close similarity in performance among boys of different nationality and education' (Brown 1965:235). A similar finding was made by Merselstein (1969) with black children who were not attending school. It is exactly this similarity of sequence across cultural settings that makes the work of Piaget extremely relevant to the present research.
The assessment of developmental stage is also consistent with Sigel and Coop's (1974) admonition that the failure to consider developmental differences may produce spurious results, indicating cognitive style differences between groups which simply develop at different rates.

The application of Piagetian constructs to the study of bilingualism can be found in almost any review of the literature. Unfortunately, however, the results of these studies are equivocal for a variety of reasons. The primary flaw in previous studies, as we have suggested, has been the failure to control for the relative linguistic proficiency of the comparison groups.

While most of the conservation studies have focused on cross-cultural comparisons which have examined the effects of schooling (see Gordon 1923, cited in Al-Issa and Dennis 1970, Husen 1951, Heber et al. 1972), more recent studies have been directly applied to the study of bilingualism within the United States.

For example, in an often-cited study on the effects of early childhood bilingualism, Feldman and Shen (1971) compared 'bilingual' and 'monolingual' subjects on Piagetian 'object constancy' tasks in which various transformations were made on different objects such as a cup, a paper plate, and a sponge. Two other types of tasks were used in which children were asked to recognize the arbitrary use of object names and to apply these names in simple sentences. The results showed the bilingual group to be superior in performing all three tasks.

Feldman and Shen argued that the ability to use arbitrary names in statements involves the ability to see language as an instrument or set of strategies which vary with linguistic and social context.

Unfortunately, the results of Feldman and Shen's study are flawed by the fact that the criteria for the assignment to subject groups were somewhat questionable. For example, assignment to the 'bilingual' group was made on the basis of the children's 'understanding of several simple Spanish questions and ability to speak Spanish at home'. No information is provided as to the nature of these questions or how the ability 'to speak Spanish at home' was operationalized. Moreover, the comparison monolingual group was confounded by both linguistic and ethnic variables since the group consisted of both Mexican-American and black children residing in the same neighborhood. Thus, while the results of this study are generally supportive of the notion of cognitive advantage for the bilingual groups, the results are nevertheless weakened by poor control over relevant variables.

The problem evidenced in the Feldman and Shen study is similarly evidenced in a study by Liedtke and Nelson (1968). In this study, where bilingual and monolingual subjects were compared on a number of Piagetian tasks, the criterion for assignment to the bilingual group was based on teacher observation. The group was defined as 'children who had used two
languages before entering school and who were exposed to both languages at home. Unfortunately, no data are provided as to the actual level of proficiency for either the bilingual or monolingual groups. Similarly, the authors provide no information as to the comparability of the two groups across socioeconomic dimensions. As in the case of the Feldman and Shen study, it would thus appear that the results of this study, while generally supporting the hypothesis of a cognitive advantage for bilinguals, is weakened by the lack of appropriate linguistic controls.

Finally, similar criticism may be leveled against a more recent study (Dahl 1976) which claimed to illustrate a superior performance for bilinguals on Piagetian tasks. In this study, children identified as speakers of Spanish upon entry [to a bilingual preschool program in southern California] were assumed to acquire English because this was the language modeled (Dahl 1976:59).

Unfortunately, no other data are provided as to the actual linguistic comparability of the two groups (bilingual and monolingual) studied.

The danger in a failure to control for linguistic variables is particularly evident in a number of other studies which have chosen to use Piagetian constructs or tasks to support a negative view of bilingualism. As such, the failure to control for level of linguistic proficiency can result in opposite results when Piagetian tasks are given. For example, in the recent study by Brown, Fournier, and Moyer (1977), Mexican-American children were tested across a battery of 10 Piagetian concepts, including various conservation tasks. The authors conclude from their study that the acquisition of a second language and, hence, bilingualism, leads to a 'developmental lag'. This study, like those which have found positive results, employed no measure or control for language proficiency. In fact, not only was there no assessment of the linguistic proficiency of the two groups, but the tests were presented in written and oral form, thus making it more difficult for those with either poor reading skills (as is typical of language minority children) or linguistic deficiencies in English.

Attitudes/perceptions. The study of attitudes may be approached in a variety of ways. In the present situation, we were initially interested in the teacher's perception of the child and the extent to which perception matched similarly defined behaviors assessed through other means. The perceptions and attitudes of teachers toward language minority students have been studied in a number of ways. In perhaps the largest study of teacher perception/attitudes (Jackson and Cosca 1973), observers visited 494 fourth, eighth, tenth, and twelfth grade classrooms. Significant results showed that
Anglo students were praised more often than Mexican-American students; teachers accepted and used more ideas presented by Anglo students and overall gave more positive feedback to Anglo students.

In a similar study, Laosa (1977) found that Mexican-American students received more disapprovals (unless their dominant language was English) and fewer pieces of nonevaluative academic information. In the Jackson and Cosca study, it is noteworthy that teachers spent 23 percent more time talking to and interacting with Anglo students than they did with Mexican-American students. It would thus appear that the teachers' perceptions and attitudes may be related to certain linguistic variables, which in turn have an impact on academic performance.

Based on the theory of Status Characteristics and Expectation States (Berger, Cohen, and Zelditch 1972), Cohen (1979) reports that the expectations of other (nonminority) students and teachers produce a self-fulfilling prophecy on the part of minority students. Basically, she argues that the preconceived attitudes of students and teachers in the classroom do not foster equal status relations in the school. As a consequence, minority students who tend to be the low achievers are directed by prior experience to fulfill this expectation.

If teachers tend to associate lack of oral English proficiency with a deficiency in other abilities (see Carter and Segura 1979), then it is easy to see the significance of Cohen's work. In fact, Cohen notes that one problem in the schools is that teachers and students tend to equate intelligence of 'ability' as a unidimensional characteristic. They also associate reading ability (or achievement) as a valid indicator of this ability. Hence, the poor reading (and achievement) of many students is interpreted as a reflection of their ability in general.

In addition, she points out that even though teachers are able to identify the symptoms of the 'low concept' child, they fail to recognize that this is perhaps but a symptom of the student's reaction to the general expectations presented to him or her in the schools.

Design and method. In an attempt to examine the interaction and relative importance of the variables we have described here, a three-year cross-cultural study was undertaken at the Southwest Educational Development Laboratory. The overall instrument design of the study is depicted in Table 1.

In the following, each of the foregoing instruments is briefly described. As may be seen, an attempt was made to include several 'convergent' measures to each construct. All tests were administered by locally trained administrators with similar ethnic backgrounds to the children.

Cultural antecedents. A Family Background Questionnaire was designed in which a number of questions were asked regarding each student's family. The questions asked concerned
Table 1. Summary of variables/measures.

<table>
<thead>
<tr>
<th>Antecedents</th>
<th>Predictors</th>
<th>Moderators</th>
<th>Outcomes variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. English in the home</td>
<td>1. Field dependence/independence</td>
<td>1. Language</td>
<td>1. Achievement</td>
</tr>
<tr>
<td>2. Other language in the home</td>
<td>(a) CEFT</td>
<td>(a) Phonetic control</td>
<td>(a) Language arts</td>
</tr>
<tr>
<td></td>
<td>(b) DAP</td>
<td>(b) Vocabulary</td>
<td>(b) Reading</td>
</tr>
<tr>
<td>3. Number of persons in household</td>
<td>2. Cognitive tempo</td>
<td>(c) Syntax comprehension</td>
<td>(c) Math</td>
</tr>
<tr>
<td></td>
<td>(a) MFFT</td>
<td>(d) Production</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) RCT</td>
<td></td>
<td></td>
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<tr>
<td>4. Father's educational level</td>
<td>3. Categorization style</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(a) SCST</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) OST</td>
<td></td>
<td></td>
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<tr>
<td>5. Mother's educational level</td>
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<tr>
<td>6. Occupation of head of household</td>
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<tr>
<td>7. Father absence</td>
<td>2. Intellectual development</td>
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<tr>
<td></td>
<td>(a) Identity</td>
<td></td>
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<td></td>
<td>(b) Length</td>
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<td>(c) Number</td>
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<td></td>
<td>(d) Substance</td>
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<td></td>
<td>(e) Distance</td>
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<td></td>
<td>(f) Horizontality</td>
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<td></td>
<td>(g) Inclusion</td>
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<tr>
<td></td>
<td>(h) Egocentricity</td>
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<tr>
<td></td>
<td>(i) Probability</td>
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<td></td>
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<tr>
<td></td>
<td>(j) Class inclusion</td>
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<tr>
<td></td>
<td>3. Teacher perception</td>
<td></td>
<td></td>
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<tr>
<td></td>
<td>(a) School adjustment</td>
<td>Teacher Observation Scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td>(b) Dependence</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>(c) Social reserve</td>
<td></td>
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</tbody>
</table>

such issues as: (1) educational background of parents, (2) language(s) used in the home, (c) family composition (i.e. number of people living in the home), (4) number of siblings and birth order, (5) place of birth, (6) occupation. Questionnaires were filled out by school personnel, usually aides who were personally familiar with the families.

Cognitive style. The Children's Embedded Figures Test (CEFT) was adapted by Karp and Konstadt (see Witkin et al. 1971) as a measure of perceptual disembedding. The test requires the subject (S) to locate a previously seen simple standard figure within a larger complex figure. S's score on the CEFT is determined by the number of correct choices made. Higher scores represent greater field independence.

The Draw A Person Test (DAP) used in this study is a version based on Witkin's (1962) five-point sophistication-of-body concept scale. It is used to measure S's level of primitiveness-sophistication of body concept. This version is considered to be a measure of cognitive style.

The Matching Familiar Figures Test (MFFT) is another measure of cognitive style. It refers to the construct of conceptual tempo and is said to assess the dimension of reflectivity-impulsivity (Kagan 1965, Kagan et al. 1964). The MFFT requires S to match a standard picture of a figure to one of six variants. The conceptual tempo classification is based on two scores: latency to first response and number of errors.

Language. The Language Assessment Scales (LAS) measures English oral language proficiency (De Avila and Duncan 1977). The test represents a convergent language assessment procedure consisting of the following subtests: oral production (story retelling), phoneme discrimination (minimal pairs) and production, vocabulary, and oral comprehension. The combined subtests yield a composite score which represents S's level of oral language proficiency corresponding to totally fluent English, near fluent English, limited English, non-English with partial English language deficiency, or non-English with total English language deficiency. Each subtest score was used in the analysis.

Intellectual development. The Cartoon Conservation Scales (CCS) is a neo-Piagetian paper-pencil measure of intellectual development (De Avila 1977). There are two levels (K-3rd and 4th-7th grade), each consisting of six different Piagetian tasks. Two of the tasks, egocentricity and conservation of substance, overlap on the two levels. Thus, for the present study only these tasks were included in the analysis. Egocentricity-perspectivism requires that S be able to recognize other visual perspectives than the one visible from S's vantage point. Conservation of substance represents the traditional Piagetian conservation task. It requires that the
subject recognize the invariance of amount of substance when its form or shape is transformed. A more detailed description of the tests and their psychometric properties and validity are described elsewhere (see, for example, De Avila, Havassy, and Pascual-Leone 1976; De Avila and Pulos 1978; De Avila 1977; De Avila et al. 1978; Ulibarri 1974).

Perceptions. A Teacher Questionnaire (TQ) was developed for this study, based in part on the work of Castañeda, Herold, and Ramírez (1974). It consists of a number of items generated from the Castañeda et al. (1974) discussion of FD/FI behaviors, and from their own teacher-observation rating forms. The TQ represents an attempt to provide an observationally based measure of three cognitive style behaviors involving S's school adjustment, dependence, and social reserve. A more complete description of the TQ and the rationale for its construction can be found in Fleming, De Avila, and Duncan (1979).

School achievement. The Standardized Achievement Tests: the use of a particular achievement test dependent upon the test being used in the school district where data were collected. Thus, several different tests were used for the analyses. Because of the differing characteristics of the scales in each test, all test data were converted to standard scores based on the test's published norm group mean at each level and the sample's standard deviation. This procedure results in a deviation score relative to the norm group mean of the particular test.

Subjects. In all, a total of 903 children were tested. Roughly the same number of children of each sex was selected from each ethnolinguistic group in grades 1, 3, and 5. For a more complete breakdown of subject parameters, the reader is referred to De Avila et al. (1979). Children were selected from nine communities for participation in the study, as follows.

(1) Urban Mexican-American. Children in this group live in a northern California community just south of San Francisco. The (K-6) school where the children were tested is located in a partially residential-commercial neighborhood. The level of English oral language proficiency of the children as a group was limited English for first graders, limited to near-fluent for third graders, and fluent English for the fifth graders.

(2) Rural Mexican-American. This group is located in southwest Texas, 10 miles from the United States-Mexico border. The community is basically agricultural, with light manufacturing. The school is K-6, with about half the teachers being Mexican-American.

(3) Puerto Rican. Children in this ethnolinguistic group come from an 'inner city' K-3 school. The school is located in a highly 'urban' city about 300 miles from New York City.
The school is 77 percent Puerto Rican. Although it is an inner city school, many of the children migrated from a rural area in Puerto Rico. About half the teachers are Puerto Rican.

(4) Cuban-American. The children in this community come from a lower middle to middle class semi-residential suburb of Miami, Florida. The children were born in the community; however, most of the parents migrated from Cuba. The school is K-6, with about 45 percent of the school enrollment being Cuban-American. About 25 percent of the staff are native Spanish speakers.

(5) Chinese-American. This group comes from a northern California community near the San Francisco Bay area. The school population is primarily Chinese-American and many of the teachers and all of the aides are Chinese-American. However, not all of the teachers speak Chinese (Cantonese).

(6) Franco-American (Cajun). The Franco-American children come from a rural-agricultural area in the backwaters of Louisiana. The (K-5) school is 95 percent French. While most of the teachers are from the area and speak French, the primary language in the school is English.

(7) Native American (Navajo). The Navajo children are from middle New Mexico just south of Santa Fe. All of the children tested live on the Indian reservation and virtually all commute to school by truck. The rural school is approximately 60 percent Native American. The aides are Navajo, but the teachers are Anglo and Chicano.

(8) Anglo-American. The children in this group are from a northern California community south of San Francisco. The community is industrial-commercial and is of low middle to middle SES. The school is K-6 and is 90 percent Anglo.

(9) Mexican. The children from this site resided in the suburban middle class section of a large metropolitan Mexican city. The children participating in the study were from lower middle to middle class families. As such, they cannot be considered as middle class in an American sense but must be viewed as basically 'mainstream' Mexican children receiving public instruction. One hundred percent of the students and faculty were Mexican and spoke virtually no English.

Summary of results and conclusions. Because of space limitations and the extensiveness of the data, it is impossible to present any of the details regarding the analyses procedures. (See De Avila and Duncan 1980.) Instead we attempt to summarize only the most important findings and to refer the reader to the relevant reports in which more detailed discussions are presented. In the discussion which follows, results are presented in four stages. In the first, we summarize the results of a series of factor analyses which were constructed on the entire data set as a means to reduce the pool to a more manageable size and to test the construct validity of the measures. In the second series, analyses of variance (ANOVA) techniques
were employed to test the extent to which the nine ethno-
linguistic groups differed on those variables shown by the
previous analyses to be valid and reliable. In a third series
of analyses, multiple regression techniques were used to
generate equations which were predictive of school achievement
for each group. In the fourth series of analyses, the data
were regrouped according to linguistic categories. Compari-
sions of test performance using analyses of variance (ANOVA)
techniques were then used to examine the extent to which
relative linguistic proficiency was more predictive of test per-
formance than ethnolinguistic group membership.

Teacher perception/observation. In the first phase of the
analyses, the 40 items of the teacher observation form were
subjected to a factor analysis. The results of this initial
analysis produced five interpretable factors. However, upon
a subsequent analysis in which both the test-retest and inter-
judge reliability of the five factors were examined, only three
were found to be sufficiently reliable to warrant discussion.
A complete description of the procedures used to develop and
analyze the teacher observation form may be found in Fleming,
De Avila, and Duncan 1979.

The intercorrelations among the 40 items were analyzed by
the method of principal components. (A Thurstonian factor-
analytic model was rejected because of near singularities in the
data, with the determinant of the correlation matrix differing
from zero by a very small amount.) Three components account-
ing for 50 percent of the original variance were retained on the
basis of Cattell's (1966) scree test, and were rotated via direct
quartimin (Harman 1976). The first factor (School Adjustment)
encompassed a number of socially desirable traits which reflect
inquisitiveness, alertness, creativity, and the like, as well as
some items thought to be related to field independence. The
latter include independence, a preference for visual aids, and
a trial-and-error approach to learning. Undoubtedly, this
factor reflects a child's likableness and ability to please or
impress the teacher. Because of the strong element of social
desirability, we were reluctant to name this factor Field Inde-
pendence.

The second factor was called Dependence. The items appear
to reflect personality characteristics associated with social de-
pendence as well as with field dependence. Salient items in-
clude the inability to concentrate, dependence upon others,
and anxiety over school work.

A child with a high score on the third factor, Social Reserve,
would be labeled reserved, reflective, or perhaps just shy.
This child is controlled in social situations. Such characteris-
tics are sometimes associated with field dependence. However,
no substantial (negative) correlation with independence was
found.
Performance variables. The performance variables in this study involve 5 measures of language, 2 measures of cognitive development, and 7 measures of cognitive style. However, since each measure also represents a different aspect or dimension of the constructs, they were grouped together on the basis of their similarities and differences through the procedure of cluster analysis (Tryon and Bailey 1970). This allowed us to obtain a perspective on the nature of the constructs (since we know there is much overlap) and also to reduce the number of original, or a priori, variables. In addition, since the main objective of the study was to identify the best set of predictors, such a procedure would be consistent with the use of multiple regression for predictive purposes (Kerlinger and Pedhazer 1973).

The results of the cluster analyses of the correlation matrix for the a priori variables indicates that the language measures, with the exception of minimal pairs (i.e. aural phoneme discrimination), loaded on the first cluster. The CEFT, DAP, and developmental measures loaded primarily on the second cluster, and the MFFT (latency and error) loaded on the third cluster. The Teacher Questionnaire tended to load equally and not very highly on all three clusters.

A clear pattern of the defining characteristics of each cluster was apparent. The first cluster was clearly language, and the third, conceptual tempo. The second cluster, however, was loaded or defined by both cognitive style and cognitive development measures. This is not a surprising result, and is, in fact, consistent with the view concerning the relationship between Piagetian tasks and the field dependence/independence cognitive style dimension (see, for example, Flavell 1963, Pascual-Leone 1970), and with the relationship of these two tasks with conceptual tempo (errors).

Performance on the MFFT, on the other hand, is reported to show moderate correlations with FDI (about -.42) and developmental trends across age (Messer 1976). The results found in this study concerning the relationship of the MFFT with CEFT errors and age were consistent with those reported by Messer (1976) and others (for example, Hetherington and McIntyre 1975). The results of the cluster analysis are also consistent with prior results.

For a more complete discussion of both the empirical and theoretical details of this aspect of the study, see De Avila and Duncan (1979).

Ethnolinguistic group comparisons. The results of the described techniques were used to generate a set of variables which were used to compare differences across ethnolinguistic groups. As may be recalled, a factor analysis of cognitive style, intellectual development, and language variables produced three factors which were labeled style/development, language, and conceptual tempo. In addition, the results of
the Teacher Questionnaire produced three reliable factors which were labeled school adjustment, dependence, and impulsivity. In the following, a series of ethnolinguistic comparisons across these six superordinate variables is discussed.

The only substantial group differences occurred on the Social Reserve subtests. The means show the Chinese-American pupils to be the most reserved and the Mexican students to be the least reserved. This finding may be of interest to some, but the Social Reserve subtest shows no relationship to any of the other measures of cognitive style. Thus, these differences do not appear meaningful in the present context.

In sum, the ethnolinguistic group (ELG) differences for those subtests which most closely resemble the behavioral characteristics associated with cognitive style are quite small in magnitude and do not seem to justify the assumption that the ELGs can be distinguished on the basis of such characteristics.

With respect to the three performance factors, three separate three-way analyses of variance were conducted across ELG x Grade x Sex.

1. Language. Examination of means shows Anglo children (as would be expected) to be the most proficient in English, followed by Cuban and French background children. With respect to grade, it was found that the age differences held for some groups and not others. Since grade differences accounted for only 10 percent of the total variance, whereas ethnolinguistic difference accounted for 39 percent, it would seem that, with respect to language difference, ethnolinguistic group comparisons are the more psychologically meaningful.

2. Style/development. Examination of the ELG mean score differences reveals little, if any, psychologically meaningful differences since ELG difference accounted for only .05 percent of the total variance. With respect to difference between the groups across the three grades, the data seem to show that for the most part, all nine groups seem to be quite similar at the first grade. This similarity seems to break down at the third and fifth grades, suggestive of the Grade x ELG interaction (p < .001) found in the ANOVA. Thus, while the performance of the Chinese and Cuban children in the first grade is commensurate with the other groups, performance in the third grade was substantially higher. This higher level of performance was maintained by the Chinese group but not by the Cuban group, whose performance in the fifth grade seemed to drop off slightly.

In contrast to the Chinese and Cuban groups, the Navajo group seemed to evidence lower overall performance relative to the other eight groups. A last comparison which is worthy of comment seems to suggest that, in contrast to previous research, the Anglo populations seemed to perform at the lower end of the distribution relative to the other groups. However, it should be borne in mind that since ethnolinguistic group
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differences accounted for only .05 percent of the total variance, these differences are not particularly meaningful in any real psychological sense.

3. Conceptual tempo. The three-way ANOVA conducted on the third factor which had been labeled impulsivity resulted in significant main effects for all three variables (ethnolinguistic group, grade, and sex), as well as in several significant interactions. Examination of the cell means reveals, for example, that the Navajo children are the least impulsive in the first grade and the most impulsive in the fifth grade. On the other hand, the French children seem to behave in a basically reflective mode throughout the grades. With respect to the other groups, it is difficult to locate a discernible pattern of differences. In this regard, it is perhaps important to bear in mind that the ANOVA results for each of the three factors, though statistically significant, accounted for only .07 percent, .11 percent, and .03 percent on the total variance, respectively. As such, one is loath to infer much in the way of meaning from these data.

In summary, it would seem that the two most stable differences which occur between the ELGs in this study were related to language and age. Over and beyond these rather straightforward results, it would be difficult to infer any real or enduring difference between the ELGs based on these measures. This is particularly the case given the complex nature of the data set. In this regard, it would seem necessary to bear in mind that larger samples such as the one used here tend to confuse 'psychological significance' with statistical significance. In other words, the ANOVA procedures used herein were highly sensitive to even the slightest differences between groups. The problem of statistical power (Cohen 1979) is one which plagues this type of research. Secondly, with regard to the use of between-group comparisons based on factor analyses, Buss and Poley (1976) caution against making group comparisons without first establishing that similar factors or traits are being measured. Regarding the findings of group differences reported by Vernon (1965, 1969), they state (1976:78):

Thus Vernon would seem to be in error to the extent that he has made quantitative comparisons across culture using the tests as dependent variables, when in fact it is not conclusive that various tests are tapping the same factor.

Buss and Poley recommend checking first to see if the factor structure remains invariant across two given cultures, and then make cross-cultural comparisons only on those factors that have been demonstrated to be structurally invariant.

Finally, Tryon (1979) argues that the process of assuming that a test score is indicative of psychological traits or of drawing inferences about ability on the basis of test scores are part of the 'test-trait fallacy'. To assume that test-traits
are constant across widely different situations or that they can be generalized to infer group differences is fraught with danger. Given these limitations, a series of analyses in which each group was treated independently was conducted; in this series the foregoing dimensions were used to predict school achievement. The results of these analyses are described here.

Academic achievement. The basic approach taken in the following series is correlational, involving the use of step-wise multiple regression analyses. In these analyses, each of the six superordinate variables we have described was analyzed for each group separately as well as by total. In the following, only the combined group results are represented. For a more detailed presentation of the within group/grade results, see De Avila et al. (1979). Academic performance in three areas was examined: reading, language arts, and math.

The equation produced by regressing the six factors on reading achievement showed that oral language proficiency was the strongest predictor, accounting for approximately 10 percent of the total variance across seven of the eight ELGs (the Mexican sample was not included in this series of analyses). The second most important factor in the equation was school adjustment as defined by the Teacher Questionnaire. This factor, however, accounted for a relatively small percentage of the total variance taken in concert. The six factors accounted for only 18 percent of the total variance, suggesting that while oral language proficiency, school adjustment, and other factors are of importance, they do not form a complete picture since almost 80 percent of the variance remained un-accounted for.

The relationship between predictor and criterion variables was somewhat stronger in the second series of analyses, where the performance and observational factors were combined in order to examine language arts achievement. The multiple R was .71, accounting for 52 percent of the total variance. Clearly, in this equation, oral language proficiency was the strongest predictor, with school adjustment accounting only for 6 percent. The remaining four factors added a total of only 3 percent to the variance accounted for by the analyses.

With respect to math achievement, the predictive strength of the six factors was somewhat weaker than was the case for reading and language arts. The analysis reveals that only .09 percent of the total variance in math achievement scores was accounted for by the six factors. Simple correlations reveal that while most of the six factors were significantly correlated with math achievement, the strength of this association was not strong. The three strongest variables were impulsivity, social reserve, and oral language proficiency. It is of some interest to note that oral language proficiency was negatively correlated with math achievement, suggesting
that as oral language proficiency is improved, it may be at the expense of math achievement. In this connection, it would be important to examine the relative proportion of time spent in the classroom on language as opposed to computational math drill exercise. A similar series of analyses was conducted within each ELG. The results of this series of analyses produced a somewhat more complex picture. For example, while oral language proficiency was the strongest predictor of reading achievement for Chinese, Rural, Mexican-American, Puerto Rican, and Native American (Navajo) subjects, school adjustment was strongest for Anglo-American, Urban Mexican-American, and Franco-American (Cajun) students. For Cuban-American students, the first step in the equation was dependency.

Unfortunately, it is difficult to draw any firm conclusions from the attempt that was made to examine the within-site prediction of language arts achievement. This was due to the fact that there were data for only four of the subgroups. Moreover, small, unequal Ns made the interpretation of these data even more difficult. It is important, however, to note that the relative strengths of the predictors within the sites seemed to match those obtained when site was collapsed in order to increase N.

The analyses of the data within sites for math achievement reveal that there is a fair degree of variation between sites with respect to the relative strength of the predictors within sites. In other words, the patterns of relative importance between the predictors seem to be somewhat variable across the eight sites used in the analyses. It is perhaps of interest to note that the dependency factor was the most significant predictor in three of the eight separate analyses and second in two others. However, since previous analyses revealed this factor to have somewhat marginal reliability, it would be imprudent to make much more of the finding.

With respect to the importance of the cognitive style/development variable, it is also important to note that in only one case across all of the analyses conducted was the cognitive style/development factor the first step in the equation predicting achievement.

In contrast, not only was the oral language factor included in virtually all of the significant predictions, but the prediction equations tended to account for a meaningful amount of the explained variance in achievement. Thus, as defined by the present instrumentation, the importance of the cognitive style dimension in academic achievement was not supported in the study. In particular, the field dependence/independence dimension defined by the CEFT, DAP, and developmental variable was a better predictor than language in only 5 of 32 analyses (or 5 of 24 that were significant). In contrast, language proficiency was a significant predictor in 19 of 32 analyses (or 19 of 24 that were significant).
Moreover, when the second regression analysis was conducted, which included the three Teacher Questionnaire (TQ) variables in addition to the three cluster scores, the results indicated that school adjustment, dependence, and social reserve were also better predictors of achievement than style/development. In some cases, these factors were even more efficient that language proficiency. In virtually every instance, regardless of achievement area or ethnolinguistic group, TQ variables tended to have the effect of removing style/development from the prediction altogether. The TQ variables were particularly efficient in the Urban Mexican-American group, where they removed 'style/development' and showed significant prediction to achievement when none was found previously. In general, predictions which were not significant became so when TQ variables were entered into the prediction equations.

It should be noted that a criticism of these interpretations could be made on the basis of the small sample sizes relative to the number of predictors (i.e. Nihm's law; see Marascuilo and Levin 1978). However, the foregoing interpretations are based on the adjusted multiple R-squared and none on statistical significance or R-squared per se. Thus, the statistics obtained should represent conservative and unbiased estimates.

Probably of most significance with regard to this finding is that whereas many researchers report a significant relationship between degree of FDI and achievement, they fail to take into account oral English language proficiency. The data reported here is significant in that it shows that when language proficiency is taken into account, FDI or cognitive style, at least as measured here, is of little significance in terms of its predictive validity. Additionally, when TQ variables were entered into the prediction, style/development was no longer important for any of the groups. Children who have higher levels of English language proficiency tend to have higher levels of achievement. And children who have higher status with regard to teacher perceptions show higher achievement. This same statement cannot be made of either cognitive style dimension.

A second finding concerns the within-group analyses. Here the results were not as clear-cut since different patterns of predictions occurred for different ethnolinguistic groups and for different areas of achievement. Nevertheless, the results indicate that a clear pattern of prediction regarding cognitive style does not emerge, so that there is no support for any conclusion regarding the importance of this construct with respect to particular ethnolinguistic groups. With regard to the present set of predictors, style/development showed constancy as a predictor only for the Anglo-American group. Again, however, when TQ was included, style/development was no longer important even for the Anglo-American group.

In the two Mexican-American samples, cognitive style was significant only in the Urban Mexican-American sample. It was
a significant predictor of achievement in language and reading, but not math. However, for reading it did not account for a meaningful amount of the variance and for language achievement, language proficiency is virtually as good a predictor as cognitive style. Even more noteworthy is the fact that the relationship is reversed in this group for predicting language and reading. This is probably indicative of the instability of the cognitive style construct. Nevertheless, when teacher perception of the student is entered into the analysis, style/performance was not a meaningful predictor. These results support the position that the Mexican-American population is not a homogenous one.

In addition, it should be noted that the pattern of prediction in the Urban Mexican-American sample is somewhat similar to that of the Anglo-Americans. Overall, this finding is interpreted to mean that cognitive style is more important (albeit not too important) in these groups than in Rural Mexican-American groups. This, together with the teacher judgment data, suggests that cognitive style is probably important only with respect to teacher judgments and when language proficiency is no longer a factor, such as in the case of the Anglo-American children.

A general finding for all ethnolinguistic groups was that language was the most important predictor of achievement relative to the other factors in this study. There were, of course, some exceptions. For example, with Anglo-Americans and Cuban-Americans, English language proficiency did not figure into the predictions at all, which is entirely understandable given the fact that both groups were totally English proficient. Cognitive style was the only significant and meaningful predictor of Anglo-American achievement and although the style/development factor significantly predicted to Urban Mexican-American reading and language achievement, the correlations were reversed. This indicates, at least for this particular sample, that the cognitive style dimension does not preclude higher levels of achievement, which is consistent with Saarni's (1973) finding for sex differences. Finally, when teacher perception of the student is included, even language, in some cases, becomes less important. It appears that language proficiency and teacher perceptions of school adjustment were the important variables in predicting achievement for the language minority children examined in this study.

Bilingualism and relative linguistic proficiency. Given the apparent relative importance of linguistic proficiency, a final series of analyses was conducted in which subjects were regrouped according to linguistic considerations.

In the first of the two substudies described here, the performance of bilingual and monolingual English and Spanish subjects was compared (De Avila and Duncan 1979). In the second study, linguistic subgroupings were expanded to include partial
and limited bilinguals along with children who were late in developing either language (Duncan and De Avila 1979). The first study may be considered as a study on the effects of bilingualism in the traditional sense, whereas the second may be considered as a more general examination of the concept of relative linguistic proficiency. In the analysis which follows, subjects were grouped according to scores on the LAS. Only those children who were the most proficient were selected. Thus, from the total of 152 Anglo children there were 119 who scored as Level 5 in English and Level 1 in Spanish. This group was defined as monolingual English or 5/1. The Spanish monolingual group (1/5) was made up of children from the Mexican site who scored as Level 5 in Spanish and Level 1 in English. The bilingual or 5/5 group was made up of children from the four Hispanic sites which included Urban and Rural Mexican-American, Puerto Rican, and Cuban-American populations. In this sense, the subgroups could be considered as Monolingual-Anglo, Monolingual-Mexican, and Bilingual-Latino.

An attempt was made to control for possible age differences by analyzing the data by grade level. However, this could not be done for all three grades, and grades 1 and 3 had to be combined due to the small number of bilinguals. Comparisons were made across CEFT, DAP, MFFT, CCS, and Teacher Questionnaire scores.

Results showed that bilingual subjects received significantly higher scores than the two monolingual groups on both the CEFT and DAP, suggesting a relationship between cognitive style and bilingualism. With respect to the MFFT scores, the bilingual group had only slightly fewer errors than either monolingual group in the first and third grades. Mean errors for the fifth grade groups were basically the same, with less than a point difference between the three groups. The latency scores showed the bilingual group to be intermediate to the two other groups with respect to impulsivity.

The analyses of the CCS subtests data in the first and third grade groups showed the bilingual group as receiving higher mean scores on five of the six subtests as well as on total score. For the fifth grade the results were somewhat mixed, with no discernible pattern of differences between the groups.

Finally, the bilingual group was seen as more school adjusted than either of the monolingual groups. No significant differences were found for either of the two other teacher factors.

In summary, it would appear that there is some support for the contention that bilinguals, at least in the earlier grades, are advanced with respect to the cognitive style/developmental and school adjustment dimensions. This difference which favors the bilinguals, however, is either lost by the fifth grade or the current instruments were insensitive to differences, possibly due to 'ceiling effects'. It may be that the results for the fifth grade groups were affected by the
relatively low number of subjects, which may have distorted possible real differences.

In the following an attempt was made to expand the number of linguistic subgroupings and to include children who were less than fully proficient in either one or both of the two languages.

In brief, the subjects who comprised the second substudy (Duncan and De Avila 1979) were from the four sites in which Spanish was the home language. These included Urban and Rural Mexican-Americans, Cuban-Americans, and Puerto Rican children. Relative linguistic proficiency (RLP) was determined through the use of the LAS and children were grouped as described on Table 2.

<table>
<thead>
<tr>
<th>English Level</th>
<th>Spanish Level</th>
<th>Total</th>
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<tbody>
<tr>
<td></td>
<td>5 4 3 2 1</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>21 18 6 0 12</td>
<td>57</td>
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<tr>
<td>4</td>
<td>9 13 12 3 14</td>
<td>51</td>
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<tr>
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<td>(4.4) (6.4)</td>
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<tr>
<td>3</td>
<td>5 22 11 6 13</td>
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<td>(2.5) (10.8)</td>
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<td>2</td>
<td>7 5 1 3</td>
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<tr>
<td>1</td>
<td>6 2 7 3 5</td>
<td>23</td>
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<tr>
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</tr>
<tr>
<td></td>
<td>(20.1) (30.4)</td>
<td>(100.0)</td>
</tr>
</tbody>
</table>

1 □ = Late language learners; 2 □ = Limited bilinguals; 3 □ = Monolinguals; 4 □ = Partial bilinguals; 5 □ = Proficient bilinguals

Given these groups, ANOVA procedures were then employed to test group differences. Post hoc comparisons were made in order to determine the source of variations. Comparisons were made as in the foregoing, across CEFT, DAP, CCS, and MFFT. Results of this substudy showed, for example, on the CCS, that the highest total score was by the proficient bilinguals. This group also produced the highest mean scores with five of the six CCS (Level 1) subscales. In order to test the relationship between RLP and intellectual development, an orthogonal contrast of mean scores was made. Results of this analysis revealed that the highest scores were obtained by the proficient bilinguals and the lowest by the late language learners.
A similar pattern to this was obtained on the DAP and CEFT measures.

In addition to these findings, there were a number of other important ones regarding relevance to the intermediate RLP groups. Of particular significance was the fact that on the CEFT and DAP, the performance of the partial bilinguals, monolinguals, and limited bilinguals was basically the same and within one standard deviation of the published norm. The proficient bilinguals' score on the CEFT was slightly more than one standard deviation above the published norm, whereas the late language learners fell approximately one standard deviation below.

There are several important implications in the findings of this second study. The first important one was that proficient bilingual children significantly outperformed all other monolingual and bilingual children on cognitive perspectivism tasks as well as on two perceptual components of field dependent/independent cognitive style. The extent of the advantages revealed in this study are significant across a series of tasks. The nature of these differences or advantages can be described in terms of superior development of egocentricity or ability to restructure or reorganize intellectually a three-dimensional display; in the relative ability to separate out part of an organized field from the field as a whole; and in level of development of articulation of body concept.

In terms of the Witkin group's 'differentiation hypothesis', the demonstrated advantages of the proficient bilingual children comprise one major indicator of greater differentiation, self-nonself segregation, and autonomy of external referents. In other words, the proficient bilingual children are significantly more capable of 'keeping things separate'. In terms of metaset theory (De Avila and Duncan 1979), this 'keeping things separate' would amount to the breaking of sets, which in turn leads to higher order restructuring of sets of functions.

The results of the study also revealed a positive, monotonic relationship between degree of relative linguistic proficiency and cognitive functioning. In other words, the more proficient the children were in each of their languages, the better they performed on the dependent measures. However, contrary to commonly held views, the 'deficiencies' of limited bilingual children appear to be linguistic rather than intellectual.

The third finding was that within the four populations of Spanish-speaking children sampled, there were significant differences in RLP, ranging from children with full native proficiency in two languages to those with total deficiencies in two languages. It will be the work of future research to establish the theoretical and empirical elaboration of these findings. With respect to the former, De Avila and Duncan (1979) have offered the concept of the 'metaset', and Cummins (1978) has offered the 'Threshold Hypothesis'. With respect to the latter, current work at Stanford University's MICA (Cohen 1980) project will go far in adding to our knowledge.
of the extent to which different treatment approaches are applicable to any or all of the different linguistic types.

NOTE

The research summarized in this monograph is based in part on the results of a three-year cross-cultural investigation of nine ethnolinguistic groups, supported by contract No. 400-65-0051 between the National Institute of Education and the Southwest Education Development Laboratory.

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The guiding principle in American public education has been the assimilationist ideal, although bilingual instruction had existed at the state and local levels during the nineteenth century to meet the needs of some immigrant groups heavily concentrated in the West, Southwest, Ohio, and Wisconsin. It was not until the early 1960s, when the Civil Rights movement helped to sensitize the country to the need for bilingual instruction, that Congress passed legislation on bilingual schooling. This step was a long awaited response to the needs of several language minority groups, dramatized by the educational plight of Mexican Americans in the Southwest, Puerto Ricans in New York City and other parts of the east coast, and the arrival of Cuban political exiles in Miami. Thus, in 1969, Congress passed and signed into law the Bilingual Education Act as Title VII of the Elementary and Secondary Education Act.

English language deficiency has been the reason most often cited by school officials and others to explain why so many language minority students underachieve in school. As a result, bilingual education legislation has been conceived within a compensatory framework intended to address English-language barriers. The Equal Education Opportunity Act of 1974 reinstates this intent under Section 1703, (f), as it identifies as discriminatory 'the failure by an educational agency to take approaches necessary to overcome the language barriers that impeded equal participation by its students in its instructional program'.

Federal appropriations for Title VII increased from the modest sum of $7.5 million in 1969 to more than $100 million in 1977. Dozens of language groups received fundings for developing bilingual programs. Bilingual education seemed well established, accepted, and recognized as governmental policy at both federal and state levels.
Today, however, the merits and effectiveness of bilingual education are being challenged by some groups in view of some preliminary data concerning the achievement scores (in mathematics, language arts, and English) of students enrolled in selected bilingual programs. While a great deal of information is needed to provide a more accurate description of the educational status of language-minority groups in the United States, the available data continue to support the notion of an educational crisis among these groups, especially within the Hispanic subgroup.

United States census data reveal that language-minority persons who usually speak languages other than English have lower educational attainment and higher dropout rates than minority persons who usually speak English. Findings for persons of Hispanic origin show that this group is even more disadvantaged than other language-minority groups. Hispanics, ages 14 to 25, who usually speak Spanish have a 45 percent dropout rate as compared to other language-minority persons whose dropout rate is 30 percent. Compared with that of persons with English-language backgrounds, the dropout rate is 4.5 times higher for Hispanics who usually speak their native tongues. Hispanics in grades 9 to 12 who usually speak Spanish have a 33 percent rate of school retardation as compared to other language-minority persons whose rate of school retardation is 29 percent (9 percent for persons of English language background).

Nevertheless, language factors alone cannot account for the two main problems faced by language-minority students: dropout rates and school retardation. Hispanics, ages 14 to 25, who usually speak English continue to have a higher dropout rate (15 percent) than other non-English-language background persons who usually speak English (10 percent). Hispanics in grades 9 to 12 who usually speak English continue to have a higher percentage in school retardation (18 percent) than other non-English-background students who usually speak English (12 percent).

Statistics on the educational attainment of the Hispanic population 25 years of age and over show that there are significant differences among Mexican-Americans, Puerto Ricans, and Cubans. On the one end of the educational scale, 23.1 percent of Mexican-Americans, 15 percent of Puerto Ricans, but 9.3 percent of Cubans have completed less than three years of school, as opposed to 3 percent of the non-Spanish population. On the other extreme, only 4.3 percent of Mexican-Americans, 4.2 percent of Puerto Ricans, but 13.9 percent of Cubans have completed four or more years of college versus 16.1 percent of the non-Spanish population.

While it cannot be disputed that language skills and English proficiency are critical for academic success, it is highly debatable that language background and language usage alone can explain differential school progress or retardation within the same ethnic group or across different groups.
Educational attainment is shaped by many forces other than language skills. It is shaped by a complex set of variables that includes among other things demographic patterns, socioeconomic status and class alignments, cultural values, community attitudes, community demands, school commitment, and community participation.

Differential educational attainment within language-minority groups indicates that socioeconomic variables and community factors must play a larger role in school progress than language factors alone. I am going to attempt to document and identify some of the sociodemographic and community factors that have an impact upon the differential attainment by Hispanic students. The data are taken from the Current Population Reports prepared by the United States Bureau of the Census and from the Advanced Reports prepared by the National Center for Education Statistics.

The first factor encompasses the population size of the Hispanic group, its demographic profile and language behavior. According to official government figures, in 1979 there were 12.1 million persons of Hispanic origin in the United States, distributed as follows: 7.3 million Mexican-Americans, 1.7 million Puerto Ricans, 800,000 Cubans, and 2.2 million persons of other Spanish origin. The Spanish-language population is found in all regions and states, but the three main subgroups are heavily concentrated in the following areas: 77 percent of the Mexican origin population is found mainly in California (41 percent) and Texas (36 percent); 74 percent of all Puerto Ricans are located in New York (64 percent) and New Jersey (10 percent); and 75 percent of the Cubans live in Florida (46 percent), New York (16 percent), and New Jersey (13 percent).

The Spanish-speaking population is primarily an urban population. From a total of 2.8 million families in 1968, about 85 percent were metropolitan dwellers, as compared to 39 percent of the non-Spanish population. There are some significant differences between the subgroups: nearly one-fifth of the Mexican origin population lives in nonmetropolitan areas as opposed to 3 percent of the Cubans and 5 percent of the Puerto Ricans.

The Hispanic group is not only the largest but also the youngest language-minority group. The median age is 22 years as compared to 30 years for the non-Spanish. There are again significant differences within the subgroups. For the Mexican-American and the Puerto Rican group the median age is 21 years, while for the Cuban group it is considerably older, 37 years.

The most important aspect of the age distribution among Hispanics is the size of their school age population. Nearly one-third (29 percent) of Hispanics are between 5 and 17 years of age; 13 percent are under 5 years. The percentages for the non-Spanish population are 24 percent and 7 percent,
respectively. The differences in age distribution within the Hispanic subgroups are also significant. Cubans have the lowest percentage of children under 6, only 8 percent, while Mexican-Americans and Puerto Ricans claim 19 percent and 17 percent, respectively. Whereas one-fourth of the Cuban population is under 18 years of age, nearly half (43 percent) of the Mexican-American and the Puerto Rican (46 percent) populations fall within this age bracket.

The high proportion of young persons from Spanish-language backgrounds, both in terms of their absolute and relative numbers, makes the Spanish-language group the predominant language-minority school population. In fact, 60 percent of children under age 18 from non-English language backgrounds have Spanish-language backgrounds. The size and saliency of the Spanish school-age group, along with its metropolitan concentration—where many other city problems affect the population—suggest that the group's educational problems can only become more acute if they are left to run their course.

If we consider now the question of Spanish language usage, we gather from data advanced by the National Center for Education Statistics (spring 1976) that there is a significant correlation between place of birth and Spanish-language usage. About two-thirds of Mexican-Americans, Puerto Ricans, and Cubans born abroad use Spanish as their main language. Among those born in the United States, the percentage is significantly lower, only one-fifth.

The same data show that almost 75 percent of all Hispanics, roughly 8.4 million, are U.S. born. About half of the Puerto Rican population were born on the island. Only 21 percent of Mexican-Americans, or slightly over 1.4 million, were born in Mexico or another foreign country, whereas 80 percent of Cubans were born abroad. Four out of five Hispanics live in Spanish-speaking households while a third of them, just over 3.7 million, usually speak Spanish. The proportions vary within the three subgroups. Ninety-six percent of Cuban-origin persons live in Spanish-speaking households, and more than half of them usually speak Spanish; roughly 83 percent of Puerto Ricans live in Spanish-language households, but 49 percent claim English as their individual language; 86 percent of Mexican-Americans live in Spanish-language households, but only 3 out of 10 claim Spanish as their individual language.

While Cubans have the highest foreign-born ratio and the largest proportion of persons with current Spanish-language exposure and usage, they also have the highest educational attainment within the Hispanic group.

If it is obvious that young Cubans have acquired English, however, statistics show that a good proportion of other Hispanic-origin children have also acquired English. The next factor to be considered, then, is the socioeconomic differentials that obtain within Hispanic subgroups.
Socioeconomic differentials within Hispanic subgroups respond to a large extent to the pre-immigrational differences among them. In contrast with the Mexican and Puerto Rican immigration motivated chiefly by economic or social aspirations, the Cuban immigration was motivated by political events. Like other political exiles, Cubans were mostly upper- and middle-class city dwellers whose pre-immigrational background showed a high education and occupational level. These pre-immigrational characteristics are reflected in the current occupational profile of the Hispanic subgroups in the United States.

The 1978 statistics prepared by the U.S. Bureau of the Census show that Cubans are at the top of the occupational scale. In 1978, 30.8 percent of Cuban males were employed in professional, technical, or managerial occupations as compared to 11.4 percent of Mexican-American, and 11.3 percent of Puerto Rican males.

In white collar occupations, the percentages were 9 percent among Cubans, 7.1 percent among Mexican-Americans, and 14.9 percent among Puerto Ricans. In blue collar occupations, Cubans had the lowest percentage, 45.3 percent, as opposed to 63.1 percent among Mexican-Americans and 52.3 percent among Puerto Ricans. Within the service category there were 14.4 percent Cubans, 11.5 percent Mexican-Americans, and 19.8 percent Puerto Ricans. Mexican-Americans had the highest proportion of males occupied as farmers, 6.9 percent, as opposed to only 1.7 percent among Puerto Ricans and 0.5 percent among Cubans.

The median income for families of Hispanic origin was $12,600 versus $17,900 for families not of Spanish origin. Again, the differences among the three subgroups are revealing: the median income for families of Mexican origin was $12,800, for Puerto Ricans $8,200, and for Cubans $15,300. One-fifth of the Spanish-origin population was below poverty level as compared to 9.3 percent of the non-Spanish populations.

Socioeconomic status influences and in many ways determines parental aspirations for the child's education, interest in and social pressure for academic achievement, standards of reward for achievement, knowledge of the child's educational process, preparation for attainment of educational goals, and the availability and quality of guidance on matters related to school work.

Wherever a favorable home environment exists, as measured by the family educational level and occupational status, one may expect it to facilitate a child's English language acquisition and his/her academic attainment. If one keeps in mind the differential socioeconomic levels of Mexican-Americans, Puerto Ricans, and Cubans, their differential academic attainment is partly elucidated.

The correlation between socioeconomic levels and academic attainment is further corroborated throughout the Children's English Services Study data gathered by the Office of Bilingual Education. Preliminary findings reveal that of the 2.4
million children with limited English proficiency aged 5-14 in 1978, 1.7 million were of Spanish background in contrast with .7 million children from other language background. English language deficiency was also found to be more prevalent among children living in three states: California (with 594,000), New York (468,000), and Texas (438,000). In sum, the percentage of English language deficiency was not only higher among children of the most socially and economically deprived language-minority group, but it was also more prevalent in those states with the highest concentration of Mexican-Americans (California and Texas) and Puerto Ricans (New York), which also happen to be the more disadvantaged Hispanic subgroups.12

Nonetheless, the educational gap between Anglos and Hispanics, so easily documented, remains difficult to explain in its entirety. Although it is attributable in part to intergroup variations, to language problems, to poverty and other aspects of the home environment, disparities in different locales suggest that local systems—and through these, the school systems—have not met the needs faced by minority children. Dropout rates for Puerto Ricans in different urban centers reflect this clearly: 31 percent in Philadelphia, 20 percent in Chicago, 21 percent in New York, compared to 80 percent in Boston.13 Disparities in the schooling gap between Mexican-Americans and Anglos in Texas and California are another example of locale differences. California shows the smallest schooling gap, Texas the largest.14 Differential achievement scores by students of Spanish-language origin in Miami reflect school differences within the Dade County Public Schools.15 While any attempt to relate the underattainment of Hispanic youth to clearly identifiable variables inside the school poses perplexing problems, an analysis of the pedagogical process itself as it varies by school context is essential.

Census data do not take into account the quality of schooling. Even in the same city the average quality of education in a highly segregated, poor neighborhood school usually differs sharply from that provided by schools located in areas of higher socioeconomic status. Though allocation of resources is an oversimplified measure of educational quality, certain inferences seem obvious. For example, of the Southwestern states, California spends the most money on education, pays the highest teacher salaries, and has the highest average daily attendance percentage. Texas is at the other extreme, with the poorest daily attendance, lowest teacher salaries, and lowest expenditures.16 State differences in the schooling attainment of members of the minority group seem broadly consistent with state differences in the quality of education expressed by their expenditures. Furthermore, where the education gap is small for one minority, it tends to be small for the other as well. This suggests that the socioeconomic position of all minorities in an area is greatly conditioned by the structure of the dominant society.
All of the aforementioned factors point to the need for research on the school context itself. School represents for many students a significant discontinuity, particularly for those minority children whose background does not fit the expectations of the school. Bilingual education programs have attempted to gap some of this discontinuity. They have, however, raised many questions. Bilingual education programs have been inherently variable insofar as ethnolinguistic subgroups, objectives, curriculum approaches, and staff characteristics are concerned. While much of this diversity is warranted in order to meet specific subgroup needs, research in the relative and/or differential effectiveness of these programs is needed to shed some light on those conditions which yield optimum rather than merely adequate results. Essential to the effectiveness of curriculum management and material development related to bilingual education are entry/exit criteria whereby a child is placed in a bilingual/monolingual classroom. There are different measures available—psychometric measures, sentence repetition, syntax measures, census type questions—although little is known about their relative validity and reliability.

Oral competence in English is essential for satisfactory functioning within our educational system, which assumes that by the fourth grade children will have acquired basic literacy skills. The ability to read and write hinges upon oral skills, yet research data on the most effective manner of imparting English as a second language to children is scant. From present dropout and school retardation rates it is obvious that those who have not acquired the necessary skills find it nearly impossible to take advantage of subsequent opportunities.

Present data relevant to teachers' characteristics seems to suggest that teachers' profiles do not contribute substantially in determining achievement in monolingual classrooms. It is highly doubtful that these findings can be extended to bilingual education programs. The results of the Teachers' Language Skills Survey conducted in 1977 by the National Center for Education Statistics\(^\text{17}\) show that teachers are being assigned to classes with language minority children on the basis of their language skills alone rather than on any specific professional preparation. Thus, from a total of 42,000 who reported teaching through a non-English language in 1976-1977, fewer than half had had even one academic course in an area related to bilingual instruction, and only one-third of an estimated 14,000 had had the necessary preparation in the language arts of a non-English language; only 14 percent of 6,000 had had academic coursework in the four basic professional areas. Concerning language skills, the non-English language had been learned as a second language. There were about 6,000 teachers who reported not having any speaking skills in the non-English language. Although Spanish-speaking children
tute a majority among those receiving bilingual instruction, only 3 percent of the teachers were of Hispanic origin.

The survey also shows that many teachers with appropriate training are not being assigned to use their training and language skills. From an estimated 130,000 public school teachers who reported having some training in bilingual education and from a total of 14,000 who reported having taken courses in the four basic areas, only 20,000 and 6,000, respectively, were using their training in 1976-1977.

The school context and teachers' influence are undoubtedly the most important for young children. In bilingual education programs the effects of the teachers' competence in the target and source language, his/her professional qualifications, attitudes toward bilingual education, satisfaction level with administrative objectives and guidelines, cannot be underestimated. The Cuban bilingual education experience has shown us how successful bilingual education can be when school characteristics are congruent with the students' profiles and their educational needs. To disregard variations among ethnic subgroups, family structures, child-rearing practices, language usage patterns, and language attitudes, may be as self-defeating as to disregard differences in curriculum design, teacher training, long and short-term goals, and curriculum management. Comparative studies focusing upon where and under what conditions students, teachers, and school succeed are essential so that their success can be emulated by other bilingual education programs.

NOTES


3. Ibid.


Though, at present, the intersection of special education and bilingual education is minimal, both programs share some rather striking similarities. Both developed because parents and courts intervened in their behalf (Lau v. Nichols; Pennsylvania Association for Retarded Children v. Commonwealth of Pennsylvania). They demand extensive preparation and skills from their teachers. They offer unique variations to the 'regular' curriculum. Their pupils have been a challenge to the schools from the earliest days of public education. Yet, until recently, bilingual education and special education have been, at best, aloof towards each other and more often than not mutually suspicious. A great deal of the difficulty has emanated from the controversies surrounding the misplacement of limited English-speaking and non-English-speaking (LES/NES) pupils in classes for the educable mentally retarded (EMR). This controversy has a long history.

At the present time such cases are often handled in a most unsatisfactory manner. The non-English-speaking child cannot keep up with his companions in the regular grades. For this reason he is sent to a special class ... This is not because the backward class is the right place for him, but rather because it furnishes an easy means of disposing of a pupil, who, through no fault of his own, is an unsatisfactory member of a regular grade (Miller 1916).

Background. This type of misplacement continues, often justified because appropriate language or bilingual instruction is not available and the small pupil-teacher ratio in EMR classes provides a way to help a child learn English. The precise dimensions of this placement process have been reported in a series of studies conducted in the 1960s.
Analyzing the steps by which children were placed in classes for the educable mentally retarded, Mercer (1973) found that at two points LES/NES children were particularly vulnerable to being misplaced. At the very first stage of the labeling process, when a teacher initiates a referral for special education, one of the critical behaviors that triggered this sequence of events was 'low competence in English' (Mercer 1971). More critically, however, at the point where an IQ test was administered, Hispanic children were eligible for placement at the rate of 238 per 1,000, while black children were 53 per 1,000, and Anglo children were 10 per 1,000. This rate of IQ-candidacy for EMR services was substantially diminished when the cutoff for defining subnormality was lowered from 80 to 70 IQ. It dropped the rate to 4 per 1,000 for Anglo children, 4 per 1,000 for black children, and 53 per 1,000 for Hispanic children.²

Studies suggest that this rate of overrepresentation of Hispanic children may be caused by the verbal (English) portions of intelligence tests (Zirkel 1972), and that these parts not only underestimate intellectual ability in these pupils but also demonstrate statistical evidence of bias (Mercer and Lewis 1979; Jensen 1975). Mercer's (1973) data, collected in Riverside, California, in the late 1960s, served to underscore a peculiar phenomenon in the public schools of that State, that characterized much of the Southwest (United States Commission on Civil Rights 1974). Classes for the educable mentally retarded were significantly overpopulated by Hispanic, LES/NES students.

Just as with the Chinese American children represented in *Lau v. Nichols*, the educational implications of this type of misplacement constituted a denial of equal educational opportunity. Unlike *Lau*, however, this special education misplacement also carried with it the possibility of segregation for all the compulsory education years (*Larry P. v. Wilson Riles*), and the possibility of lifelong stigma emanating from a label that altered one's status and rights before society. Not surprisingly, and just as in *Lau*, this type of inequity found its way to court. *Diana v. California* is the court case involving special education and children from diverse linguistic backgrounds.

The plaintiffs were migrant, Spanish-speaking, elementary school-age children who had been tested on an English test of intelligence and placed in EMR classes. The complaint was filed in 1970 as a class action suit on behalf of all similarly placed children in California. The relevant issues included: stigma, irreparable harm, unequal educational opportunity, and bias in the tests and testing practices. The case was settled out of court. This settlement was unique in its far-reaching provisions: (1) it ordered the re-testing of all such children in California, using both English and Spanish; (2) it called for monitoring the representation of Hispanic children in all EMR classes; (3) it proposed that an intelligence test appropriate for these children be developed and normed; and (4) it
provided for the use of nonverbal tests of intelligence to diagnose mental retardation.

Since 1970, these provisions have produced varied results in California. Though there has been a greater sensitivity to the use of a child's primary language in testing (California State Department of Education 1979), the naive use of interpreters and the useless practice of translating test items from English to Spanish without any regard for determining concurrence of item p values or validity coefficients, have made the assessment of Hispanic children's intelligence questionable and unreliable. Unfortunately, this Diana provision, as well as guidelines in the professional literature (Tucker 1977), have failed to move testing practices to routinely include estimates of language proficiency in the testing of LES/NES children's mental ability.

The second provision, calling for the monitoring of school districts' EMR classes, has been misinterpreted as a quota system in California. It is quite likely that educational opportunities for EMR Hispanic pupils, in some instances, have been denied. This provision has also caused a reticence on the part of assessment personnel to evaluate children who happen to have a Spanish surname.

The third provision, calling for the development of a Mexican-American test of intelligence, was eliminated by lawyers for both sides. This, in retrospect, was a shortsighted, unfortunate decision. Apparently, experts for Diana had determined that a Spanish version of the Wechsler Intelligence Scales for Children (WISC) (or the Stanford Binet) was impossible to develop because of the wide range of dialect features extant in California Spanish. This hypothesis was never really empirically tested, though it continues to the present to have the force of dogma, often blocking efforts at test development. This stance is not devoid of support (Laosa 1975). However, it is somewhat of an enigma to note that the Hispanic communications media (radio, television, newspapers) have never really described dialect features as national or local impediments. In the near future, this popular belief, as it applies to tests, may finally be evaluated. Many instruments are available in Spanish and English (Pletcher, Locks, Reynolds, and Sisson 1978), and more appear to be in the process of development (Woodcock 1978).

Finally, the provision allowing for testing on nonverbal measures of IQ has become standard practice. This has provided substantial protection for Hispanic pupils since, as the research data indicate, their Performance and nonverbal IQ is equal or near-equal to that of Anglo children in spite of large SES differences (Mercer and Lewis 1979; Jensen 1973). These results are consistent with DeAvila's findings on the equality of cognitive development between Anglo and Mexican-American children on Piagetian tasks (DeAvila and Havassy 1975). Performance estimates of IQ and Piagetian tasks are factorially similar (Vernon 1965).
The present. The Diana case has not really ended. As of 1978, a new agreement is being negotiated. This new Remedy Memorandum, together with the landmark provisions in Public Law 94-142 and the movement towards nonbiased testing (Oakland 1977), have ushered in a new era in the relationship between bilingual education and special education. This could not have come at a more propitious time. If, as the Lau Writ of Certiorari indicated, there are indeed thousands of LES/NES pupils in the United States, up to 10 percent of them may need special education services across the full range of exceptionalities (Kirk 1972a). Diagnostic and instructional services appropriate to their language backgrounds will be needed.

The Diana Remedy Memorandum is a radical departure from other similar court interventions involving testing and minority children. The focus is not just on the end-product of assessment, or rates of overrepresentation. Instead, the process of assessment receives the greatest amount of attention. Those who test will have to do so in the language of the child for those language groups in California that make up 85 percent of the LES/NES population. The credentials of those engaged in psychoeducational evaluations will also have to certify competence in the areas of second language acquisition, culture, selection of appropriate tests, and use of interpreters (for the assessment of the remaining 15 percent of the LES/NES population in California). Likewise, the State commits itself to initiate and fund test development in the primary languages of the LES/NES populations.

In this context, a critical aside must be made concerning the justification for conducting linguistically appropriate assessments. Unlike bilingual education where value-laden, often political rhetoric about the 'propriety' of bilingual programs in an English-speaking country is often entertained (Epstein 1977), the requirements of a valid psychological diagnosis of a handicapping condition do not allow for this type of debate. Like medical examinations, the overriding ethic is to effect valid and accurate diagnoses. Since there is very little done in psychological evaluations that does not require interpretation and inference through some form of language output, there is no justification for using a language other than the primary language of the pupil.

Public Law 94-142. Public Law 94-142, The Education of All Handicapped Children Act of 1975, is the landmark piece of legislation in special education. It guarantees to all handicapped children in the United States the right: to a free public education, to an individualized education program (IEP), to due process, to education in the least segregated environment, to tests that are not culturally discriminatory, and to multi-dimensional assessment.

Public Law 94-142 also speaks to the rights of LES/NES children. It orders that testing and evaluation materials or
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procedures 'be provided and administered in the child's native language' (Section 612). Unfortunately, it ends this proviso with 'unless it is clearly not feasible to do so', a qualifier that echoes the hesitations of Justice Blackmun's Lau opinion and that promises great possibilities with regard to the interpretation of the meaning of 'clearly' in 'unless it is clearly [my emphasis] not feasible to do so'. Fortunately, some states and school districts have instituted statutes that paraphrase Public Law 94-142's mandate about native language testing without the last qualifier on feasibility (California Assembly Bill 1250, 1977; Board of Education of the City of Chicago 1979).

Public Law 94-142 does not speak about the language of instruction that should be used with handicapped LES/NES pupils. Perforce Lau, in conjunction with 94-142's mandate to provide an appropriate educational program, should make bilingual or primary language instruction the most 'appropriate'. The arguments for total English-language immersion are hollow and devoid of legal standing (Roos 1978) when applied to LES/NES students who must also contend with a handicapping condition.

Public Law 94-142 is very deliberate with regard to nonbiased assessment. It unequivocally states that 'tests and evaluation procedures will be selected and administered so as not to be racially or culturally discriminatory' (Section 612). In spite of the fact that there is considerable interpretation in the professional literature about the meaning of this mandate (U.S. Office of Education 1978b), two major developments have helped to operationalize the meaning of nondiscriminatory assessment.

First, IQ has ceased to be the predominant construct in determining the existence of several handicapping conditions. Adaptive behavior occupies an equivalent status in diagnosing mental retardation (Grossman 1973) and some emotional handicaps (Lambert, Windmiller, Cole, and Figueroa 1975); while the assessment of linguistic abilities has also come to play a major role in determining learning disabilities (Hallahan and Kauffman 1978). Second, the development of the System of Multicultural Pluralistic Assessment (SOMPA) (Mercer and Lewis 1978), in both Spanish and English, provides a major breakthrough in culturally appropriate and linguistically relevant testing.

Adaptive behavior refers to 'the effectiveness or degree with which the individual meets the standards of personal independence and social responsibility expected of his age or cultural group' (Grossman 1973). Usually, a parent is asked to evaluate his or her offspring's performance on several areas of independent functioning and social behaviors. The two most popular tests of adaptive behavior, the AAMD Adaptive Behavior Scales, Public School Version (ABS-PSV) (Lambert, Windmiller, Cole, and Figueroa, 1975) and the Adaptive Behavior Inventory for Children (ABIC) (Mercer and Lewis 1977), report that there are no differences in the adaptive behaviors
of Hispanic, black, and Anglo children. The tests, in effect, are nonbiased.

In this writer's opinion, the full contribution of adaptive behavior has yet to be realized. Tests of adaptive behavior stress the basic type of child functioning that is almost universally elicited and conditioned by parents in child rearing. Socialization behaviors such as dressing, feeding, and self-management are similar across most urban, Western groups. Cultural differences, preferences in behaviors (Figueroa and Gallegos 1978) and interpersonal styles (Ford and Graves 1977; Kagan 1977) particular to any given group are not included, possibly ignoring unique forms of adaptivity 'expected of his age or cultural groups' (Grossman 1973), or, worse, possibly penalizing for uniqueness in these areas. There is, in fact, some indication that the ABIC may do precisely this. When the raw data for each item in the norming groups in the ABIC are analyzed for significant differences, the Hispanic group scores significantly below the white and black groups on 64 items and never scores significantly above these groups on any item. The white group scores significantly below the other groups on 14 items and significantly above on 19. The black group scores significantly below the other groups on 15 items and above on 58 items. It is interesting to note that the Hispanic group scores worst on the Community Roles subscale of the ABIC, an outcome that seems to run counter to most prevailing data on Mexican-American children relative to community and pro-social behaviors (Ramirez and Castaneda 1974; Kagan 1977). There is also some evidence that the ABS-PSV may not be very powerful in differentiating between EMR and normal children (Cole 1977). An added difficulty with this instrument for LES/NES pupils is that it is not available in any language other than English and that it is normed on teachers' judgments about children's adaptivity. As already noted, teachers tend to be substantially compromised in their judgments when the language of the student is limited in English proficiency (Stedman and Adams 1973).

As for tests of psycholinguistic abilities, they, particularly the Illinois Test of Psycholinguistic Abilities (Kirk, McCarthy, and Kirk 1971), started the learning disabilities movement (Hallahan and Kaufman 1978). In spite of the criticisms leveled against their covert measurement of verbal intelligence, they have been instrumental in moving special education more towards instructional planning and away from categorical labeling. Unfortunately, the weakness of these instruments when used with LES/NES pupils has not been acknowledged. In fact, many texts and studies reflect a rather severe ignorance about the psychometric impact of LES/NES status on 'psycholinguistic' scores (Kirk 1972b).

Finally, SOMPA (Mercer and Lewis 1978), for the first time in the history of special education assessment, provides an entire set of medical, social, and pluralistic tests that were normed
and developed on large, equal numbers of Hispanic, black, and Anglo children (5-11 years of age). SOMPA is presently the best aid to clinical judgment for Anglo testers and diagnosticians when it comes to nonbiased assessment. Family input in this system is extensive. A standardized procedure for determining how much a child differs from the expectations of the Anglo American school is provided. Also, different norms can be used with different sociocultural groups on the Wechsler Intelligence Scales for Children-Revised (WISC-R).

What are badly needed in SOMPA to make it very appropriate for LES/NES students are a measure of language proficiency, statistical data on the covariation of language proficiency levels on all the SOMPA tests, and linguistically appropriate and normed versions of the WISC-R.

Needs for the future. As mentioned, these recent developments have ushered in a new era between bilingual and special education. There still remain, however, many needs that have yet to be addressed. The following areas require research and development before any meaningful intersection between special and bilingual education can be said to occur; or, more critically, before any appropriate delivery of services can be offered to LES/NES handicapped children.

Due process. Parental involvement in almost every facet of special education is guaranteed under Public Law 94-142. The right to informed consent and the right to a public hearing involving the education of their children are two basic principles included in parent rights (Bersoff 1978). The processes by which these rights are exercised are extremely complex and involve quasi-legal, adversary procedures. When parents are LES/NES and economically disadvantaged, there is a likelihood that the process may not work effectively. Research and development in the following areas may change this.

(1) Models for disseminating information to LES/NES parents about their rights under 94-142 need to be evaluated for efficacy and impact.
(2) The steps involved in procuring truly informed consent from LES/NES parents should be determined.
(3) Research in the interactions of LES/NES status, educational background, sociocultural background, and participation in the assessment of their children's behavioral and developmental characteristics should be undertaken with LES/NES parents.
(4) Perceptions and attitudes about exceptionalities among linguistically diverse groups should be more thoroughly investigated to see if these influence the type of special education participation of parents (Edgerton and Karno 1972; Adkins and Young 1976; Eyman et al. 1977; Luetke 1976).
(5) Studies should be conducted comparing the process and outcomes of parent-initiated hearings challenging special education decisions and initiated by non-LES/NES and by LES/NES parents.

Diagnosis and assessment. Techniques and instruments used in determining handicapping conditions that do not involve clear and dramatic biological and psychiatric symptoms are fraught with liabilities. These processes are always inferential, more often than not rely on the interpretation of subjects' linguistic behaviors, and can involve substantial error. These weaknesses are accentuated when such procedures are applied to minority populations, particularly when these are LES/NES and disadvantaged. The research needs in this area are extensive.

(1) Research is needed on what criteria, other than English-based academic achievement, can be used to validate tests included in special education placements. This involves investigating when a test can be used for educational prognosis and when it can be used for diagnosing a handicap.

(2) Research on bias (Sandoval 1979; Berry and Lopez 1977) should include not just tests and test items but also the criteria used for establishing validity. Further, it should include in its design measures of acculturation (Olmedo 1979) and language proficiency (Rincon 1976) to test for interaction effects.

(3) Studies should be undertaken to determine what level of bilingual/cross-cultural skills are needed by Anglo testers to produce reliable and valid assessments of LES/NES pupils.

(4) The meaning of 'Learning Disabilities', when applied to LES/NES students, should be determined. In this context, it may well be that children who are proficient in neither their primary nor secondary language make up a unique type of exceptionality under the Learning Disabilities category.

(5) Studies should be undertaken on a national level to determine what are the current professional practices followed in special education assessment for LES and NES children (Morris 1977). The psychometric and psychological data on the testing of Hispanic children always assume a certain level of functional English language skills. Little is known about how certified LES/NES pupils are diagnosed and placed in special education.

(6) Tests that are currently available need to be evaluated, empirically, relative to predictive, concurrent, and factorial validity for both LES and NES students (e.g. Corman and Budoff 1974; Jensen 1975; Hickey 1973). Often, tests that purport to measure one type of
construct--e.g. perceptual--may actually assess some other factor when used with LES/NES pupils (Lombard and Harney 1977; Bryen 1976).

(7) Validation studies using bilingual education placements and outcomes need to be undertaken for tests presently judged appropriate for LES/NES students (Center for Bilingual Education 1978).

(8) Sources and evidence of bias in criterion-reference measures when used with LES/NES children should be studied.

Personnel competencies. Personnel involved in diagnosis and instruction in special education who hold special education credentials and bilingual education credentials are extremely rare (Baca 1974). Some colleges and universities have started programs that merge special and bilingual education competencies; however, their numbers are few. The availability of pre- and in-service training grants from the Bureau for the Education of the Handicapped and from the Office of Bilingual Education could encourage this trend. Ideally, studies in the following areas could guide and help efforts to train personnel.

(1) Surveys should be undertaken to determine what types of bilingual/special education teaching competencies are most needed throughout the country.

(2) Demonstration projects should be studied to see what, if any, relationship exists between teaching and remedial techniques developed for English-speaking, handicapped children and their translations or adaptations to bilingual, handicapped children in every type of exceptionality (Strong 1972).

(3) Factors which influence the effectiveness (as measured either in terms of achievement or mainstreaming) of bilingual, special education classes should be researched.

(4) Studies should be done on the attitudes of bilingual teachers about exceptional children being mainstreamed in their classrooms.

(5) Surveys on the available bilingual materials for handicapped LES/NES pupils should be conducted, their judged effectiveness evaluated, and future needs in this area outlined.

Individual Education Programs (IEP). The IEP is the heart of Public Law 94-142. IEPs are extremely difficult to produce (U.S. Office of Education 1978a). They assume that the learner's unique learning needs have been correctly described and that a particular instructional treatment will interact with these to produce maximal outcomes. It is this writer's opinion that, overall, few true IEPs exist. Many of the assessments and prescriptions designated as IEPs are compliance documents that serve to protect the schools rather than engage individual
differences. The bilingual child's IEP poses greater challenges than does the regular IEP. Research in this area is virtually nonexistent. The following areas need attention.

(1) The effect of the IEP writer's cultural and linguistic background on the content of the IEPs should be investigated.

(2) Differences, if any, between the IEPs of LES/NES handicapped pupils and those of their English-speaking peers should be evaluated to see if there is comparability in the degree and types of assessments, the range of services called for, the educational outcomes expected, the degree of mainstreaming that is recommended, and, where applicable, the relationship between these IEPs and minimum graduation standards.

(3) Research on the impact of various levels of language proficiency on all facets of the IEP process should be done for LES/NES pupils.

(4) The factors operating in successfully mainstreaming various types of handicapped LES/NES pupils should be investigated. Included here is the need to find appropriate criteria for a possible second-phase mainstreaming, i.e. from the bilingual class to the English-speaking class. The need for a unique form of exit criteria may apply here.

(5) Studies should be conducted to see if ethnic patterns of mental abilities (Stodolsky and Lesser 1967; Ramirez and Castaneda 1974; Werner, Simonian, and Smith 1968; Price-Williams and Ramirez 1977) are acknowledged and used in LES/NES IEPs.

(6) Research is needed on the competence and capability of school districts to provide linguistically appropriate special education services to LES/NES pupils (Roos 1978).

Conclusion. At present, the intersection of special education and bilingual education is insufficient to meet the needs of LES/NES handicapped pupils. As the LES/NES population increases in the United States, more and more handicapped pupils from linguistically diverse backgrounds will be referred for special services. Without quick, substantial efforts towards bringing bilingual education and special education into greater collaboration and understanding, court interventions will continue to define their intersection. This is not a desirable procedure. Courts are not capable of delineating needs and goals for the future. Educators--through research, development, and policy--must exercise this function. Investigative efforts should proceed first and should avoid the pitfalls of past efforts (e.g. Reschly and Jipson 1976; Amante 1975; Gilmore et al. 1975) by including in every study reliable procedures for measuring language proficiency).
NOTES

1. Letter of Dr. Allan Simmons, California State Department of Education, to Mr. M. Jourdane, counsel for Diana, July 26, 1973 [on file in the Legal Office of the California State Department of Education].

2. J. R. Mercer. Summary of findings from the epidemiology of mental retardation conducted in Riverside, California. Undated mimeographed paper, University of California, Riverside.


4. Letter of Mr. Glick, counsel for Diana, to Mr. Asher Rubin, counsel for the State of California, April 3, 1973 [on file in the Legal Office of the California State Department of Education].


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BILITERACY FOR BILINGUAL CHILDREN BY GRADE 1: 
THE SED CENTER PRESCHOOL READING PROJECT, 
PHASE 1

Robert Lado
Georgetown University

Irma Hanson and Timothy D'Emilio
Spanish Education Development Center

1. The challenge. With few exceptions the educational, socioeconomic, and even political future of bilinguals is decided in grade 1 largely on the basis of learning to read English, a language they know imperfectly or not at all. This invalid selection determines who will go to college, who will enter the professions, who will have access to elected office, who will win scholarships and fellowships for higher education, etc. As a result, Hispanics, who lag in reading because of this false start, fare badly in access to education, employment, and all the rest.

It is known that Spanish-speaking school-age children in the United States score far below the national average in reading (Education Commission of the States 1977; American Institute of Research 1977), and it is generally understood that poor achievement and high dropout rates among Hispanics in the United States are related in obvious ways to low reading competence.

This sad state of affairs is doubly shocking because it is unnecessary. Reading retardation among Hispanic bilinguals is preventable, because (1) Spanish provides an easier access to reading than English since it has fewer spelling irregularities; (2) learning to read a language they know is easier than learning to read English, which they know less well or not at all (Modiano 1973); (3) the transfer of reading skills from Spanish to English is almost total, and as a result the time it takes to read English after they read Spanish is considerably less; and (4) learning to read before grade 1 produces better
readers than after grade 1. Even if we are not ready to accept all four premises, any two of them would be sufficient to show that reading retardation among Hispanic bilinguals is unnecessary.

Some who oppose the teaching of reading before grade 1 appeal to Piaget's developmental stages for their argument. They believe that learning to read requires concrete operational thinking, which, according to Piaget, develops after the age of six years. We, on the other hand, view reading (Lado 1976) as language processing, and learning to read as another dimension of language acquisition. In our view, learning to read represents symbolic learning, and according to Piaget, symbolic thinking develops maximally between the ages of two and six years. Our view of learning to read through the native language before grade 1 is not only not in conflict with Piagetian developmental stages, it actually takes advantage of them. What we have done at the SED Center is to give preschool Hispanic children reading experience in meaningful play situations through the native language first and later through English. Furthermore, since it is possible to control input in early reading more easily than in language acquisition, we selected the experiences according to our linguistic knowledge and insights to provide a graded sequence that does not overload the acquisition capacity of the children.

There is impressive evidence of individual bilingual children becoming biliterate in Spanish and English by grade 1 from verified case studies under the care and attention of qualified thoughtful parents: Christian (1976), A. Past (1976), K. Past (1976), Hanson (in preparation), Miño-Garcés (1980). These children are now at the top of their classes in reading, and average or above average in other subjects. They like school and enjoy reading. It does not take a crystal ball to predict that they will have access to scholarships and other opportunities to advance in and contribute to our society. Yet these case studies deal with privileged children who received the enlightened attention of gifted parents. The question remains whether all preschool bilinguals, including those from low socioeconomic families, can accomplish the feat of achieving biliteracy by grade 1.

That is the goal of the SED Center Preschool Reading Project, which involves 50 children ages three to five years from low-income bilingual families in Washington, D.C., enrolled at the Center. This three-year study is now in its second year. The original five-year-old children have gone to first grade in other schools after one year of reading experience. The original four-year-olds are now five years old and will leave at the end of their second year of reading. The original three-year-olds will have a third year of reading in the basic design, which assigns the first year and a half to Spanish and the second year and a half to English.
2. The method. To attain literacy competence in English, through Spanish, before entering grade 1, the program is divided into two phases. Phase 1 is concerned with teaching the children to read Spanish, their native language. Phase 2 consists of teaching the preschoolers to read in English once the Spanish reading experience is completed.

All children enjoy playing games. If involved in a play activity, their attention will be placed on whatever the game involves. In this program, reading is presented to them as a game, and reading in Spanish and in English has become an enjoyable experience.

The curriculum is a carefully sequenced course of reading experiences complemented by a variety of games, visual aids, books, and play situations which sustain interest. Children learn by progressive familiarization with the units and skills of reading through four basic steps: naming, matching, recognizing, and reading, and gradually learn to read new material on their own by 'breaking the code'.

Since the attention span of preschoolers is very short, the daily reading sessions are 10 to 20 minutes long. The amount of time varies, depending on the number of children involved in a reading session at a given reading period. The four basic steps are followed in the same order in each session.

The first step is naming. A flash card with the printed word is presented. The teacher reads it, invites the child to repeat it, and to place it on the bulletin board. A maximum of four words is presented this way. Then, the teacher and child read the four words.

The second step is matching. The same words are shown from a book. The child matches the word being shown with the corresponding one on the bulletin board. Each word presented in the naming process is matched in this manner. A point is scored by the child for each word correctly matched.

The third step is recognition. The teacher and preschooler read the words. A game is played. If the child gives the teacher the word asked for, the child scores a point. If an incorrect choice is made, the child is helped to choose the correct one but the teacher scores a point.

The fourth step is reading. The child is shown the words and is asked to read them. Several games, charts, surprise boxes, and card games are used in this step.

Once the words are introduced, they are reviewed in three or four sessions before moving on to new vocabulary.

Two important points are kept in mind. First, reading is a play activity, a game. It is a play situation to which very few children refuse to come. In order to keep them motivated, many different games such as The Rabbit, The Frog, The Bee, and card games with words are played. Charts with animal
figures, clowns, and words are used for variety. Flash cards, holiday decorations with words, word Bingo, and play televisions are used in class. These visual aids keep the children interested. Basically, they are reinforcing the vocabulary and basic structures being learned throughout the 13 Spanish and 11 English booklets.

Second, attendance is voluntary. Preschoolers are invited to participate in the reading class, and most attend classes every day. However, if the child does not feel like attending the reading session, he is not forced. There have been a few occasions in which a child has preferred another activity such as painting, playing, or listening to a story being read, at the time he is to attend his reading lesson; yet later that day, that same child has asked to come to the reading class. If for any given reason a child has not been able to attend the reading session, he inquires why.

Individual attention is given to those children who advance rapidly and to those who are much slower in learning to read. Children who perform more or less the same are left in small groups of two or three at a time. Some of the children have advanced more rapidly than expected and others more slowly, but one basic fact stands out, namely, that all of the children are learning to read. Equally significant is the fact that all the children are highly motivated and have maintained that motivation throughout the year and a half the program has been functioning.

3. Interim evaluation. The SED Center Preschool Reading Project completed its first year in August, 1979 with the following general results.

(1) All of the 50 three-, four-, and five-year-old children learned to read (decode and comprehend) some Spanish; half of the preschool group were progressing as expected along the specific reading objectives for the Spanish phase of the program; a few children surpassed expectations.

(2) Voluntary attendance was high. If a child attended preschool on a particular day, it was likely that he or she showed an eagerness to join a reading session, regardless of the stage of the curriculum at which that child was reading.

(3) Parents reported they were encouraged by the results they saw in their children's reading performance. Seventy percent of the parents could be counted on to attend meetings, yet only 20 percent could be induced to practice reading with their children at home on a regular basis. It must be remembered that these are low-income families whose parents, in many instances, had imperfect knowledge of English or none at all, and who in some instances were not literate themselves.

(4) An informal telephone survey made in January, 1979 suggested that the children's progress correlated highly with parent home-use of the reading materials.
The significance of these results is both practical and theoretical. In terms of practical significance, Right to Read (HEW Grant No. G007800581) saw the results as a basis for renewing their contract at a higher budget level, and decided that the project would be referred for closer review by its system of nationally recommended programs.

Dr. Theodore Andersson, author of *Bilingual Schooling in the United States* and a consultant to the project, wrote to Right to Read (July, 1979) of the project's first year and its theoretical significance:

There are in the literature many individual cases of very young children learning to read one and even two languages, usually with the encouragement of their parents; but group learning such as this is quite exceptional, especially when it is combined with freedom by the individual child to progress at his own rate.

As an interim update to this year's results, we find ourselves with a new group of three-year-olds, but only a slight turnover in the four- and five-year-old groups. To understand these update remarks, the reader should keep in mind that each child is normally introduced to the Spanish phase first. Upon successful completion of that phase, English is then introduced.

Up to this point in the project's second year (i.e. after 18 months), all but four of the four- and five-year-old children who have participated from the time the project began are reading Spanish at a performance level equivalent to late first or early second grade Spanish readers, and have begun the English phase.

Among all of the 37 four- and five-year-olds, including new enrollees, 15 have passed the midpoint of the English phase, and 8 are presently reading first grade materials in both languages.

Finally, we expect that nine children graduating this August will be biliterate after two years of preschool reading. Those nine children represent 70 percent of the five-year-olds who have attended the project from the beginning.

These figures indicate that the concept of preschool biliteracy should be considered by those school systems which are aware that far too many of today's Hispanic preschoolers are tomorrow's elementary school remedials. The number of children affected by SED Center's Preschool Reading Project is small, but its apparent success means that children who otherwise might be treated as having a 'language handicap' in first grade next September, will probably be treated as having a 'language advantage'. That advantage potentially exists for every young Spanish-speaker in the United States.
REFERENCES


THE INPUT HYPOTHESIS

Stephen Krashen
University of Southern California

In my opinion, the Input Hypothesis may be the single most important concept in second language acquisition today. It is important because it attempts to answer the crucial theoretical question of how we acquire language. It is of great practical importance because it may hold the answer to many of our everyday problems in second language instruction at all levels, child and adult. It makes clear predictions as to the best use of class time in foreign and second language classes, what materials will succeed and what materials will not succeed, how syllabi should be designed, how to deal with large classes, how the performer can maintain or even improve fluency in a second language in the absence of large numbers of speakers, and, dealing specifically with the bilingual education area, it provides at least a linguistic prediction as to the value of pull-out classes, extra ESL, teaching language through subject matter, and other issues.

The organization of this paper is as follows: I first present some theoretical work, some hypotheses about second language acquisition that logically need to precede a presentation of the Input Hypothesis. I then state my version of the Input Hypothesis. Following this, there is a brief summary of the evidence that supports the Input Hypothesis, evidence from theoretical linguistics (first and second language acquisition studies), and evidence from applied linguistics (comparative methodology studies). The traditional 'implications' section then follows. In the implications section, I return to some of the predictions listed in the opening paragraph and try to deliver what was promised there. Finally, I deal with some problems in application.
Some hypotheses about second language acquisition

1. The Acquisition-Learning Hypothesis. Second language performers have two distinct ways of developing ability in second languages. Language acquisition is similar to the way children develop first language competence. It is a subconscious process, and results in implicit knowledge of the language. Language learning is 'knowing about' language, or 'formal' knowledge of a language. As I have noted elsewhere (Krashen 1977, 1979), such scholars as Corder, Lawler and Selinker, and Widdowson have proposed similar dichotomies. There is considerable evidence supporting the usefulness of such a dichotomy. A summary of these advantages would require a separate and rather lengthy paper. The interested reader may consult Krashen (forthcoming), as well as Bialystok and Frohlich (1977), d'Anglejan (1978), and Stevick (1980).

2. The Natural Order Hypothesis. Second language acquirers acquire (not learn) grammatical structures in a predictable order. In my opinion, there is overwhelming evidence supporting this hypothesis. See, for example, Krashen (forthcoming), Schumann (1978), Dulay and Burt (1977), and the papers and citations in Hatch (1978). It should be stated, however, that the order of acquisition is not strictly linear, with acquirers first acquiring structure number one, followed inevitably by number two, etc. What is claimed is that we can speak of an 'average' order of acquisition that occurs reliably (Hatch and Wagner-Gough 1976). We see some individual variation, groups of structures may be acquired in groups, but there are definite and predictable regularities. Also, the order of acquisition in second language is not identical to that seen in first language acquisition, but there are some similarities (Krashen forthcoming).

3. The Monitor Hypothesis. Conscious learning is available only as a Monitor. Our fluency comes from acquisition, not learning. Conscious learning is available only to edit, to make corrections on the output of the acquired system. Figure 1 illustrates this, showing how we can 'monitor' the output of the acquired system before, or after, we speak or write.

Figure 1. The Monitor Model for second language performance.
This hypothesis gives acquisition the central role in second language performance. Learning is assigned a more peripheral role, a role that appears to me to be getting smaller and smaller as our research progresses! We now hypothesize, thanks to several empirical studies, that the Monitor can only be effectively used if several conditions are satisfied. These are all necessary, not sufficient conditions: in other words, even if all conditions are met, we may not see effective use of the conscious grammar. The three conditions are as follows: (1) The performer must have enough time. In normal conversation, there is rarely enough time to consult conscious rules. (2) Focus on form. Dulay and Burt have pointed out that time is not sufficient. Even with unlimited time, as in writing, performers are often so concerned with what they are saying that they do not consider how they are saying it and do not monitor. (3) Know the rule. This is a formidable condition, considering how incomplete our knowledge of the structure of language is. Again, all three conditions must be met, and even this is no guarantee of perfect Monitor use. All three are met when we give students grammar tests ('discrete-point') and when they do grammar-type assignments, and even then, performance is not perfect.

The Input Hypothesis. If indeed acquisition has the central role in second language performance, it follows that the goal of second language pedagogy should be to encourage acquisition. The Input Hypothesis attempts to describe how language is acquired, and is thus of great interest both to theoreticians and to those interested in language teaching at all levels.

The problem of how we acquire language can be restated as follows: given the correctness of the natural order hypothesis, how do we 'move' from one stage to another? If an acquirer is at 'stage 4', how can he progress to 'stage 5', or, more generally, how do we go from stage i, where i represents current competence, to i+1? The Input Hypothesis makes the following claim: a necessary condition to move from stage i to stage i+1 is that the acquirer understand input that contains i+1, where 'understand' means that the acquirer is focused on the meaning and not the form of the utterance.

We acquire, in other words, only when we understand language that contains structure that is a little beyond where we are now. How is this possible? How can we understand language that contains structures that we have not yet acquired? As Hatch (1978) points out, our usual pedagogical approach is to assume the opposite: we first learn structures, then learn how to 'use' them in communication. The answer to this apparent paradox is that we use more than our linguistic competence to help us understand; we also use context, our knowledge of the world, or our extralinguistic information. In the second language classroom, context is provided via visual aids (pictures) and discussion of familiar topics.
A very interesting subhypothesis of the Input Hypothesis is that the 'best' input should not even attempt to deliberately aim at i+1. We are all familiar with syllabi that attempt to do this; there is a 'structure of the day', and both teacher and student feel that the aim of the lesson is to teach or practice a specific grammatical item or structure. Once this structure is 'mastered', the syllabus proceeds on to the next one. This hypothesis claims that such a deliberate attempt to provide i+1 is not necessary. It may even be harmful! Specifically, it hypothesizes that if there is successful communication, if the acquirer indeed understands the message contained in the input, i+1 will be automatically provided.

In other words, input for acquisition need not focus only on i+1, it only needs to contain it. Stage i+1 will be supplied, and naturally reviewed, when the acquirer obtains enough comprehensible input.¹

A final part of the Input Hypothesis states that speaking fluency cannot be taught or practiced directly. Rather, it 'emerges' over time, on its own.² The best way (the only way?) to 'teach' speaking, according to this view, is simply to provide comprehensible input. Early speech will come when the acquirer feels 'ready'; this readiness state arrives at somewhat different times for different people, however. Early speech, moreover, is not very accurate. Accuracy develops over time as the acquirer hears and understands more input. Table 1 summarizes the Input Hypothesis.

Table 1. The Input Hypothesis.

| 1. | The Input Hypothesis relates to acquisition, not learning. |
| 2. | We acquire by understanding language that contains structure a bit beyond our current level of competence (i+1). This is done with the help of context or extralinguistic information. |
| 3. | Spoken fluency 'emerges'. It is not taught directly. |
| 4. | When speakers talk to acquirers so that the acquirers understand the message, speakers may be providing optimal input that is superior to 'finely tuned' syllabi. |

Evidence supporting the Input Hypothesis

First language acquisition in children: Caretaker speech. The Input Hypothesis is very consistent with what is known about 'caretaker speech', the modifications that parents and others make when talking to young children. The most interesting and, I think, the most important characteristic of caretaker speech is that it is not a deliberate effort to teach language. Rather, as Clark and Clark (1977) point out, caretaker speech is modified in order to aid comprehension. Caretakers talk 'simpler' in an effort to make themselves understood.
A second characteristic of interest to us here is the finding that caretaker speech, while it is syntactically 'simpler' than adult-adult speech, is 'roughly tuned' to the child's current level of linguistic competence, not 'finely tuned'. In other words, caretaker speech is not precisely adjusted to the level of each child, but tends to get more complex as the child progresses. Very good evidence for 'rough tuning' comes from Cross (1977) and Newport, Gleitman, and Gleitman (1977), who report that correlations between input complexity and measures of the child's linguistic maturity, while positive and often significant, are usually not very large. An interpretation of this finding is that caretakers are not taking aim exactly at i+1. Their input includes i+1, but also includes the stages i and i-n (structures already acquired), plus a bit of i+2, i+3, etc. (structures the acquirer is not ready for yet). This is 'rough tuning'.

A third characteristic of caretaker speech that concerns us is known as the 'here and now' principle. It is well established that caretakers talk mostly about what the child can perceive, what is in the immediate environment. They are far more prone to talk about what is in the room and happening now (See the ball?) rather than what is not in the room and what is not current (What will we do upstairs tomorrow?). As Newport et al. (1977) point out, this is a topical constraint--the 'here and now' principle reflects the common interest of the caretaker and child.

While there is no direct evidence showing that caretaker speech is indeed more effective than unmodified input, the Input Hypothesis predicts that caretaker speech will be very useful for the child. First, it is, or aims to be, comprehensible. The 'here and now' feature provides extralinguistic support (context) that aids in understanding language containing i+1. As MacNamara (1972) pointed out, the child does not acquire grammar first and then use it for understanding. The child understands first, and this helps him to acquire language.

As mentioned earlier, roughly tuned caretaker speech covers the child's i+1, but not exclusively. A subhypothesis of the Input Hypothesis (known as the Net Hypothesis in Krashen 1980), claims that this is optimal. Rough-tuning has the following advantages in child first language acquisition.

(1) It insures that i+1 is covered, with no guesswork as to just what i+1 is for each child. On the other hand, deliberate aim at i+1 might miss!

(2) Roughly tuned input will provide i+1 for more than one child at a time. Finely tuned input, even if accurate, will only benefit the child whose i+1 is exactly the same as what is contained in the input.

(3) Roughly tuned input provides built-in review. We need not be concerned with whether a child has 'mastered' a structure, whether the child was paying attention to the input that
day, or whether we provided enough. With natural, roughly tuned input, i+1 will occur and reoccur.

If it is the case that i+1 is always there, given enough comprehensible input, the caretaker need not worry about consciously programming structure. Brown (1977) comes to similar conclusions. Here are his suggestions as to how a concerned parent can 'facilitate' a child's acquisition of language.

Believe that your child can understand more than he or she can say, and seek, above all, to communicate ... There is no set of rules of how to talk to a child that can even approach what you unconsciously know. If you concentrate on communicating, everything else will follow.

Second language acquisition: Simple codes. According to hypothesis 1, the Acquisition-Learning Hypothesis, the second language performer, child and adult, is also an 'acquirer'. According to hypothesis 2, there is a natural order of acquisition in second language acquisition as well as in first language acquisition. In addition, there is a close similarity between caretaker speech directed at first language acquirers and 'foreigner talk', modified speech directed at second language acquirers, and its classroom version 'teacher talk' (the language of 'classroom management'). The Input Hypothesis is thus also consistent with second language acquisition data and phenomena.

As is the case with caretaker speech, foreigner talk, and teacher talk modifications are not made for the purpose of language teaching, but are for communication. Also, they appear to be roughly tuned to the level of the second language performer (Freed 1980, Gaies 1977; for a review, see Krashen 1980); more advanced second language performers tend to get more complex input.

These simple codes may therefore function for second language performers as caretaker speech does for children, and they may be more efficient than lock-step approaches that follow a grammatical syllabus. As in child first language acquisition, roughly tuned, comprehensible input may have real advantages over finely tuned input that aims deliberately at i+1. Here, in brief, is the case against the grammatical syllabus:

(1) All students may not be at the same stage. The 'structure of the day' may not be the i+1 for many of the students. With natural, communicative input, i+1 will be provided for everyone.

(2) With a grammatical syllabus, each structure is presented only once. If the student misses it, is absent, is not paying attention, or if there simply has not been enough 'practice', the student may have to wait until next year! On the other
hand, roughly tuned comprehensible input allows for natural review.

(3) A grammatical syllabus assumes we know the order of acquisition. No such assumption is necessary when we rely on comprehensible input.

(4) Finally, a grammatical syllabus, and the resulting grammatical focus, place serious constraints on what can be discussed. Too often, it is difficult if not impossible to discuss or read anything of real interest if our underlying motive is to practice relative clauses. In other words, a grammatical focus will usually prevent real communication using the second language.

We should not, in other words, try to teach along a natural order.

Foreigner talk and teacher talk have problems that caretaker speech does not have. First, there may be considerable individual variation in the ability to give comprehensible input to second language acquirers. A study now underway, conducted by Michael Long, suggests that ESL teachers do a better job of it than do 'civilians'! Also, in the case of teacher talk, the constraints imposed even by the best classrooms will place limits on how much can be acquired. Finally, all this will work only if enough input is provided. There is little chance of covering i+1 with a single paragraph of reading or one dialogue. Even if i+1 is covered, even if it happens to be there for some of the students, it takes much more than a few exposures for acquisition.

Second language acquisition: The silent period and first language influence. The Input Hypothesis is also consistent with other phenomena in second language acquisition. One of these is the 'Silent Period', a phenomenon that is most noticeable in child second language acquisition. It is well attested that children in natural second language acquisition environments typically do not produce 'creative' language for several months, producing only memorized whole phrases, such as the useful example Get out of here (Hatch 1972). The explanation for the Silent Period is simple—the child is building up competence via listening, by understanding the language around him.

Adults, and children in formal language classes, are usually not allowed a Silent Period. They are asked to produce right away. I have argued (evidence in Krashen 1977; Krashen forthcoming) that this leads to first language influence: performers 'fall back' on the first language when they have not yet acquired enough of the second language to initiate the utterance they want. There is a fair amount of evidence in support of this hypothesis, first proposed by L. Newmark (1966). Performers simply think in the first language, add vocabulary from the second language to 'fill the slots', and make (some) corrections using the conscious Monitor. We can
overcome first language influence with more acquisition of the second language, more comprehensible input. Newmark suggested the same solution. The answer to ignorance is knowledge, or acquisition.

Applied linguistics research: The success of 'input methods'. The Input Hypothesis is also consistent with results of what can be called 'method comparison experiments'. Several scholars and groups of scholars have attempted to determine directly which teaching method is best by simple comparison. Groups of students studying second and foreign languages using two different methods are compared, either in long-term studies (one to two years, as in American studies) or short-term studies (covering a series of lessons, as in the GUME project). My reading of studies comparing what can now be called 'traditional' methods (audio-lingual as compared to grammar-translation or cognitive-code) is as follows:

(1) 'Deductive' methods (rule first, then practice, i.e. grammar-translation and cognitive-code) are slightly more effective than audio-lingual teaching for adults. The differences are statistically significant but are not large. Students make progress in both approaches.

(2) For adolescents, there is no measurable difference.

The profession's response to such results has been to be eclectic. Unfortunately, this sometimes means to take the worst aspects from each approach: conscious grammar teaching from deductive approaches and pattern drills from AL teaching. Stevick (1976), however, asked a very perceptive question: if different teaching methods are based on very different theories of language acquisition, and yet their direct comparison yields very similar outcomes, how can this be? My answer to Stevick's 'riddle' is that none of the methods compared in the method comparison studies involving traditional methods provides much in the way of comprehensible input. The Input Hypothesis predicts, moreover, that an approach that provides substantial quantities of comprehensible input will do much better than any of the traditional approaches.

There are several newer approaches that do this, such as Asher's Total Physical Response system (Asher 1966, 1969) and Terrell's Natural Approach (Terrell 1977). In these methods, classtime is devoted to providing comprehensible input, where the focus is on the message, and students are not expected to produce in the second language until they are 'ready'. Moreover, these methods also do not put the student 'on the defensive' (Stevick 1976) by insisting on early accuracy. In Dulay and Burt's terms (Dulay and Burt 1977), they keep the affective filter down, and keep the student open to the input. There are unpublished reports from the University of California at Irvine attesting to the success of the Natural Approach
in first year college German and Spanish. Reports confirming the superiority of Total Physical Response have been appearing regularly in the professional literature for nearly ten years. In what is admittedly the most spectacular study, Asher found his Total Physical Response German students reaching the same level in reading and writing in 32 hours as control (AL) students did in 150 hours, with the experimental subjects actually excelling in listening comprehension. This is nearly five times as fast, and is in striking contrast with the small differences found in studies comparing older methods (Asher 1972).

Several other experiments confirm the generalization that 'input methods' are superior (Postovsky 1974, for adults; Gary 1978, for children). Despite the methodological problems associated with classroom research, these results are very reliable.

Implications. The implications of the Input Hypothesis are truly exciting for all of us interested in language acquisition. For those involved in second and foreign language teaching, it predicts that the classroom may be an excellent place for second language acquisition, at least up to the 'intermediate' level. For beginners, the classroom can be much better than the outside world, since the outside usually provides the beginner very little comprehensible input, especially for older acquirers (Wagner-Gough and Hatch 1975). In the classroom, we can provide an hour per day of comprehensible input in a low-anxiety situation, which is probably much better than the outside world can do for the beginner.

The Input Hypothesis defines the language teacher as someone who can make input comprehensible, not someone who only knows the formal structure of language. It says that if students understand the message, and are interested in it, they will acquire the language it is encoded in. This predicts that subject-matter teaching, if comprehensible (if at what Cummins refers to as the threshold level: Cummins 1979), will promote second language acquisition. The results of immersion programs confirm this (Tucker 1980). It predicts that extra ESL will help only if it provides comprehensible input not available elsewhere. It will not help if students are getting comprehensible input either in subject-matter classes or from the informal environment. This prediction appears to be correct (Fathman 1975; Hale and Budar 1970). It also predicts that ESL classes will be less efficient if they are drill or grammar oriented.

It predicts that linguistically, pull-out subject matter makes sense, if it is done in a way that is sensitive to the social and psychological circumstances.

It predicts that you do not have to talk in order to improve in a second language. What you do need is comprehensible input that contains structures a bit beyond where you are now. Talking may help you get that input in informal situations and in the classroom (Seliger 1977), and certainly your output will help your conversational partner to at least roughly tune his
input to your level (help you understand). But the contributions that output makes are indirect, not direct. Those of us who need to maintain fluency in other languages need comprehensible input. Conversation may be the best way to get input, but books, tapes, etc., presenting messages we genuinely want to hear, should be of great help.

Some problems. Comprehensible input is necessary for language acquisition, but it is not sufficient. As mentioned briefly earlier, if the affective conditions are not right, the affective filter will be up, and the input, while understood, may not penetrate deeply (combining Duyal and Burt's and Stevick's terminology). I have claimed elsewhere (Krashen forthcoming) that if we do indeed provide an interesting message, do not put the student on the defensive by excessive error correction and demands for premature performance, we will do a great deal toward lowering the filter.

Before concluding, one very serious problem needs to be discussed regarding the acceptance of language acquisition as primary and comprehensible input as the means of encouraging language acquisition. Acquisition is slow and subtle, while learning is often fast and obvious. Acquisition takes time; it takes far more than five hours per week over nine months to acquire the subjunctive. It may, in fact, take years. Good linguists, on the other hand, can consciously learn a great deal of syntax in a short time. Most second language students, however, are not linguists, and are not as interested in the structure of language as we are. Most syllabi and testing procedures are designed by people like us, for people like us. In addition, people like us derive great pleasure from the learning and use of conscious rules. 'Mastering' the subjunctive in French was very satisfying for me, and I rekindle this sense of victory every time I plan and say *Il faut que j'aille*. But this is not real language acquisition. It is not available in most real communicative situations (*Il faut que je vais*) and it is applicable to only a small part of the grammar. Moreover, most people get their pleasures elsewhere, and acquire second languages while they are focused on something else, while they are gaining interesting or needed information, or interacting with people they like to be with.

NOTES

1. There are instances when comprehensible input will not contain i+1, even if such input is supplied in quantity, i.e. in purely instrumental uses of language in restricted domains (e.g. service stations), in language classes at too low a level for the student, etc.

2. Speaking skills that depend on acquired competence emerge over time. There appear to be at least two ways of beating the system: we can produce using memorized language,
routines, and patterns (for a review, see Krashen and Scarcella 1978), and by using the first language surface structure plus the conscious grammar (Krashen 1977). Both of these methods of performing without acquired competence have drawbacks and limitations (see references cited earlier).

3. This is not to say that conscious learning has no role in second language instruction and performance. It does have a role, but is no longer the star performer. The effective use of conscious rules, in situations where it does not get in the way of communication, has a definite and important cosmetic effect. It makes second language output look better, and this is important, especially for advanced students. Error correction, hypothesized to affect only the conscious grammar, should therefore focus on those nonacquired, 'learnable' items that students can apply to their output when all conditions for Monitor use are satisfied. Learning is thus a part of the total program, but only a small part. Moreover, it seems to be the case that only some adults are effective Monitor users, and that children have much less capacity for the use of conscious rules (Krashen 1978).

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THE RELATIVE PROFICIENCY
OF LIMITED ENGLISH PROFICIENT STUDENTS

Heidi Dulay and Marina Burt
Bloomsbury West, San Francisco

It has been generally assumed that most children of limited English proficiency are more fluent in their native language than in English. Our research investigations suggest that this assumption is not correct. In a Southern California school district, for example, where about 800 Hispanic limited English proficient (LEP) children have been identified, less than half speak Spanish better than English. The district found, in fact, that almost 40 percent of their LEP children spoke no Spanish at all. As will be seen shortly, this situation is not unique to this school district, nor is it unique to California.

This subpopulation of children, like other LEP children, has English language skills that are not quite on a par with those of nonminority English speakers their own age. Unlike other LEP children, however, their level of Spanish skills is equally low or substantially lower. Most of these children can communicate in English; they simply have not scored at norm levels in English language skills—a problem many underachieving monolingual native English speakers also have.

The existence of children who are underachieving in two languages does not detract from the merits of being bilingual (any more than the existence of underachieving monolingual English-speaking school children reflects upon the language skills of the rest of the monolingual population). In fact, there is a growing literature indicating that knowing more than one language is cognitively enriching.

Psycholinguistic studies indicate that people who control more than one language are verbally more skillful than monolinguals, and they mature earlier with respect to linguistic abstraction skills. Lerea and Laporta (1971) and Palmer (1972) report, for example, that bilinguals have better auditory memory than monolinguals, and Slobin (1968) found that bilinguals are
better at intuiting meaning from unknown words. Feldman and Shen (1971) discovered that low income bilingual children were better at learning new labels than low income monolinguals, and Peale and Lambert (1962) concluded that ten-year-olds who spoke both French and English demonstrated higher skill in linguistic abstraction than their monolingual counterparts.

Similarly, neurolinguistic research is beginning to suggest that people who know more than one language make use of more of the brain than monolinguals do. Though the evidence is scant, it seems that the part of the brain that is used in second language functioning remains underdeveloped in monolingual brains. Albert and Obler (1978) reviewed a series of post-mortem studies on polyglot brains—brains of people who spoke from 3 to 26 languages—and found that certain parts of these brains were especially well developed and markedly furrowed.

During the last decade, we and many others have spent much time emphasizing the enriching aspects of bilingualism and pointing out evidence for the educational advantages of instruction via the child's stronger language (Dulay and Burt 1980, 1979a, 1979b, 1979c, 1976; Troike 1978; Plante 1977; Rosier and Farra 1976; Modiano 1973; Balasubramonian et al. 1973; Treviño 1968; Ramos et al. 1967). Many have been persuaded that instruction through the child's mother tongue is useful in helping immigrant children hold their own in school. To wit, the federal government alone spends over $250 million a year on bilingual education (González 1980), a phenomenal increase from the $7 million with which the Elementary and Secondary Education Act (ESEA) Title VII started in 1968.

During the last two years, we have turned our attention to previously overlooked subpopulations of LEP children—those for whom new educational approaches must be developed because their proficiency in the 'home' language is not as high as had been assumed.

The purpose of this paper is to bring these students to the attention of educators, scholars, students, and policymakers. We also clarify terms and procedures used in 'relative proficiency' assessment, summarize available data pertaining to the size and home language characteristics of the various LEP subpopulations, and suggest the outlines of programmatic recommendations.

Data on the size of LEP subpopulations. When the English and home (or primary) language proficiency of LEP students are compared, three distinct subgroups within the population of limited English proficient students emerge: (1) students who are more proficient in their primary language; (2) students who, though limited in English, are more proficient in English than in their primary language; and (3) students whose proficiency in their primary language and in English is limited
to an equal extent. We refer to these students as 'primary-language-superior', 'English-superior', and 'comparably limited', respectively.

Each group has unique linguistic characteristics and correspondingly different educational needs. As Table 1 shows, each comprises a substantial portion of the total limited English proficient population, depending on the district.

Table 1. Proportion of LEP students in three relative proficiency categories (California, Fall 1978).

<table>
<thead>
<tr>
<th>Grade span of district &amp; county</th>
<th>% Spanish superior</th>
<th>% Equally limited</th>
<th>% English superior</th>
<th>No. of children</th>
<th>Instrument used*</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1: K-8, Santa Clara</td>
<td>6</td>
<td>16</td>
<td>78</td>
<td>166</td>
<td>BSM</td>
</tr>
<tr>
<td>D2: K-6, Monterey</td>
<td>26</td>
<td>57</td>
<td>17</td>
<td>208</td>
<td>BINL</td>
</tr>
<tr>
<td>D3: 7-12, Santa Barbara</td>
<td>12</td>
<td>65</td>
<td>23</td>
<td>284</td>
<td>BINL</td>
</tr>
<tr>
<td>D4: K-8, Riverside</td>
<td>40</td>
<td>22</td>
<td>38</td>
<td>784</td>
<td>LAS</td>
</tr>
<tr>
<td>D5: K-8, Ventura</td>
<td>51</td>
<td>35</td>
<td>14</td>
<td>675</td>
<td>LAS</td>
</tr>
<tr>
<td>D6: K-6, Los Angeles</td>
<td>81</td>
<td>9</td>
<td>10</td>
<td>206</td>
<td>LAS</td>
</tr>
<tr>
<td>D7: K-2, San Diego</td>
<td>90</td>
<td>7</td>
<td>3</td>
<td>578</td>
<td>BSM</td>
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<tr>
<td>Total</td>
<td>6</td>
<td>16</td>
<td>78</td>
<td>2,899</td>
<td></td>
</tr>
</tbody>
</table>

*Instruments: BSM = Bilingual Syntax Measure; LAS = Language Assessment Scale; BINL = Bilingual Inventory of Natural Language.

The data displayed in Table 1 were compiled from assessment data made available to us by school districts in California. We collected the data as part of a project sponsored by the California Department of Education to help refine the conceptual framework for bilingual education in California (Dulay and Burt in press, 1979d, 1979e). Although time and fiscal constraints did not permit us to use statistical sampling techniques to select the sample, the data represent almost 3,000 students drawn from seven counties spanning the geography of California. We used data from all the LEP students in each district to arrive at the percentages in the table. Thus, the percentages indicated for each subgroup are true proportions, not estimates.

The districts used a three-step process to assess the students. First, a home survey (described later in this paper) of all students in the district was conducted to identify all students from a language background other than English. The identified 'national origin minority' (language minority) students were then tested to determine whether they were proficient English speakers. All students who were proficient in English were eliminated from further testing, while those who scored in the limited range were classified as 'limited English proficient'. The LEP students were then tested to determine their home language proficiency. A comparison of Hispanic students' English and Spanish proficiency scores yielded their relative proficiency classification. (See the next section for a detailed description of these procedures.)

The districts used three instruments that are among the four recommended by the State of California for proficiency testing for purposes of identifying children for bilingual programs:
Bilingual Syntax Measure (BSM), Bilingual Inventory of Natural Language (BINL), and Language Assessment Scale (LAS). All three have comparable English and Spanish versions, enabling districts to obtain relative proficiency classifications as well as independent Spanish and English proficiency scores. All three measure oral proficiency only.

Procedures and criteria to determine relative proficiency.
The key to relative proficiency assessment is testing the students in each language independently. Proficiency scores obtained in each language may be used to prescribe instruction in each language and may be compared to determine the student's stronger language. (See Burt and Dulay 1978 for discussion of the uses of assessment data.)

To illustrate relative proficiency assessment, let us take a district that uses a test with five proficiency levels. (The three tests used by the districts have either four, five, or six proficiency levels.) The English version is usually given first to determine whether the student is limited in English. English-speaking majority students usually score in the top level of these tests; thus, students scoring in the top level are considered proficient while those who score in the lower levels are usually considered limited to varying degrees. Figure 1 illustrates this concept.

Figure 1. Limited English proficiency classification.

<table>
<thead>
<tr>
<th>English proficiency levels</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5: Proficient</td>
<td>= Proficient or fluent in English</td>
</tr>
<tr>
<td>4: Intermediate</td>
<td></td>
</tr>
<tr>
<td>3: Survival</td>
<td>= Limited English Proficient (LEP)</td>
</tr>
<tr>
<td>2: Comprehension only</td>
<td></td>
</tr>
<tr>
<td>1: Beginning</td>
<td></td>
</tr>
</tbody>
</table>

If the Spanish, Pilipino, Chinese, or other language version of the test is also given, the same proficiency levels are generated for that language and are matched with the student's English level. In this study, a student was considered superior in one of the languages tested if he or she scored one full level higher in one language than the other.

Figure 2 illustrates all the Spanish-English level combinations that yield a Spanish-superior classification, while Figure 3 illustrates the same for English-superior classification. Ten different Spanish-English level combinations yield a Spanish-superior classification, while only six combinations yield an English-superior classification. This is unavoidable because students who score at Level 5 in English are proficient and therefore not included in the count, whereas students who score at level 5 in Spanish are included if they score at a level lower in English.
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Figure 2. Spanish-superior classification.

<table>
<thead>
<tr>
<th>English levels</th>
<th>Spanish levels</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

\{ = Spanish superior

Figure 3. English-superior classification.

<table>
<thead>
<tr>
<th>English levels</th>
<th>Spanish levels</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

\{ = English superior

As Figure 4 illustrates, students who score in the same level in both languages and are within the range of limited proficiency are 'equally limited'.

Figure 4. Equally limited classification.

<table>
<thead>
<tr>
<th>English levels</th>
<th>Spanish levels</th>
<th>Classification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

\{ = Equally limited

We use the less common term 'superior' because the more popular term 'dominant' has caused confusion. Dominance may be defined in several ways. To some it means relative proficiency as defined earlier in this paper. To others it means relative comfort in using two languages; if a student is more comfortable using language X, the student may be said to be X-dominant (cf. San Diego City School District 1977). Other indirect measures of language dominance that were first used in basic research on bilingualism have also been associated...
with dominance. Word association tests, for example, which Lambert, Havelka, and Gardner (1959) used in their theoretical studies of bilingualism, also yield information on dominance, but such information does not directly measure proficiency in either language. (A more comprehensive discussion of these concepts is beyond the scope of this paper; see Hernandez, Burt, and Dulay 1978 for an overview of language dominance concepts.)

In brief, dominance can mean relative proficiency, but it also has other meanings that fall quite short of relative proficiency. Fortunately, the term 'superiority' has not been used in other fields or other research efforts, only in recent bilingual policy work. We can thus be relatively sure that it means-- or will mean--relative proficiency to our readers.

Discussion of findings. The proportion of LEP students who are actually Spanish-superior (the first column of numbers in Table 1) ranges from a high of 90 percent in a border district in San Diego County to a low of 6 percent in a northern California district. These are the students who conform to the characteristics that most of us usually think about when we speak of limited English-speaking students.

The next two columns represent students who are also LEP but do not have the Spanish skills that the Spanish-superior students have. The proportion of English-superior students also spans a wide range: from a high of 78 percent in the northernmost district to a low of 3 percent in the border district. Districts that are geographically in between show percentages of English- and Spanish-superior students that are within the range set by the first two.

Although no formal empirical study has yet been conducted to probe the factors underlying district differences, it appears that the farther away the district is from the Mexican border, the more English-superior students there are. It is also usually the case that the closer a district is to the border, the more recent immigrants there are in the community, while districts farther away have more second and later generation families who use English as a matter of course. Studies of Spanish language maintenance in the United States have documented the loss of Spanish by Hispanic communities over time (Hernandez-Chavez 1978, Merino 1976). Such findings are consistent with the decline in the percentage of Spanish-superior children as one moves northward from the California-Mexico border.

The existence of large numbers of LEP students who are English-superior or equally limited in both languages is not unique to California. According to Professor Bernard Spolsky of New Mexico, the problem is just as severe in the public schools of New Mexico. Many Hispanic children who are underachieving in English language skills speak little or no Spanish. Spolsky reports that four doctoral dissertations done at the
University of New Mexico, in addition to his own observations, document this phenomenon (Teitelbaum 1976, Ortiz 1975, Brisk 1972, Timmins 1971).

Similarly, the Federal District Court of Colorado found that Chicano students in the Mesa County Valley School District who were limited in English were also limited in Spanish (Otero v. Mesa). And the consent decree in Aspira of New York, Inc. v. Board of Education of the City of New York states that transitional bilingual education should be offered at least to students whose proficiency in English was lower than their proficiency in the native language. (Cf. Epstein 1977:29.)

The data reported in Table 1 are based only on oral proficiency assessments, not reading and writing. The proportion of English-superior LEP children would increase dramatically if we included students who are classified as LEP based on their underachievement in English reading or writing. We refer to children who are fluent English speakers but limited English readers or writers. Preliminary data from a national bilingual assessment project indicate that most Hispanic students reading below grade level in English read substantially less well in Spanish.

A comparison of two different counts of California LEP students—one using only oral proficiency assessment, the other using reading and writing criteria as well—indicates that the addition of children who are limited only in English reading or writing skills (they are orally proficient) doubles the LEP population. According to the State of California, there were 275,000 LEP students in California in 1978. This count was based largely on oral English proficiency assessments. On the other hand, the National Institute of Education’s Children’s English and Services Study reports that there were 584,000 LEP students in California in 1978 (Forum 1979); this figure was based on the assessment of reading and writing, as well as oral English skills. Although one could question the comparability of the oral assessment in the two counts, the comparison suggests that the data reported in Table 1 probably underestimate the percentages of LEP students who are English-superior or comparably limited.

Home language data: Corroboration of the relative proficiency findings. The finding that large numbers of limited English proficient students are actually English-superior or comparably limited in their home language and English has great educational significance. No instructional approaches have been developed for such students and their development will entail some change from the approaches currently used for limited English proficient students. Changes in instructional approach invariably entail different requirements for teachers which, in turn, set the wheels of politics in motion.
A recognition of the potential impact of our findings on the education and politics of LEP students led us to search for independent evidence that would confirm—or disconfirm—our relative proficiency findings. We turned to data on the language LEP students speak at home. If a LEP student were English superior, his or her home language proficiency would, at best, be at the 'survival' level; probably more commonly, the student would be able to understand some of the language but would not be able to speak much of it. Consequently, most of the English-superior students would have to speak English at home, even if their parents or other adults spoke another language.

If our relative proficiency criteria and assessments were sound, we should find that the majority of Hispanic students classified as English-superior speak English at home, while the majority of students classified as Spanish superior speak Spanish at home.

Obtaining home language information is radically different from obtaining language proficiency information. The procedure involves survey questionnaires or interviews rather than testing. And parents, rather than students, are the sources of the information. The inherent differences between home language data collection methodology and relative proficiency assessment techniques make home language data maximally useful as an independent check against the accuracy of relative proficiency results.

The Home Language Survey, a four-item questionnaire used by California school districts to survey parents, includes a question that asks what language the child speaks at home. The Home Language Survey is the first step in the identification of LEP students. It determines which students are 'national origin minority' and who should, therefore, be tested to determine English proficiency.

We analyzed the Survey data that had been collected by two of the districts from which we had obtained relative proficiency assessment data. One district was in Northern California, the other in Southern California; one used the Bilingual Syntax Measure, the other used the Language Assessment Scale to measure students' proficiency in English and Spanish.

The results are striking. According to the Survey, 84 percent of the English-superior students spoke English at home; 90 percent of the Spanish-superior students spoke Spanish at home; approximately half of the comparably limited students spoke English and approximately half spoke Spanish at home.

These findings, displayed in Table 2, corroborate the relative proficiency data presented in Table 1. They add persuasive evidence for the existence of a large subpopulation of LEP children who are English-superior.

'Home language' A misnomer? Some readers may ask, as we did, how it is possible that students who do not fluently
speak a language other than English can be classified as having a home or primary language other than English.

Table 2. Number and percentage of LEP students by relative proficiency and language student speaks at home.

<table>
<thead>
<tr>
<th>Languages students speak at home</th>
<th>Relative proficiency of LEP students</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Spanish</td>
</tr>
<tr>
<td></td>
<td>English</td>
</tr>
<tr>
<td></td>
<td>Equally limited</td>
</tr>
<tr>
<td>English</td>
<td>38 (10)</td>
</tr>
<tr>
<td></td>
<td>280 (84)</td>
</tr>
<tr>
<td></td>
<td>121 (49)</td>
</tr>
<tr>
<td></td>
<td>429 (47)</td>
</tr>
<tr>
<td>Spanish</td>
<td>324 (90)</td>
</tr>
<tr>
<td></td>
<td>55 (16)</td>
</tr>
<tr>
<td></td>
<td>126 (51)</td>
</tr>
<tr>
<td></td>
<td>505 (53)</td>
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<tr>
<td></td>
<td>362</td>
</tr>
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<td></td>
<td>335</td>
</tr>
<tr>
<td></td>
<td>247</td>
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<tr>
<td></td>
<td>994</td>
</tr>
</tbody>
</table>

The answer turns out to be quite simple. The Lau Remedies (Office for Civil Rights 1975) define 'primary' or 'home language' so that the definition need not refer to the language the student speaks at home. According to the Remedies, a student's primary or home language is other than English if it meets any one of the following descriptions: the student's first acquired language is other than English; the language most often spoken by the student is other than English; the language most often spoken in the student's home is other than English, regardless of the language spoken by the student (Office for Civil Rights 1975:Section I; emphasis added). These definitions have been used as the basis for developing ESEA Title VII regulations as well as state bilingual education policies throughout the country.

California's Home Language Survey is a typical outgrowth of the Lau Remedies. It includes four questions:

1. Which language did your son or daughter learn when he or she first began to talk?
2. What language does your son or daughter most frequently use at home?
3. What language do you use most frequently to speak to your son or daughter?
4. Name the languages in the order most often spoken by the adults at home.

A response of a non-English language to any of the four questions classifies the student as having a home language other than English. This includes a response of 'English and X'. Thus, if a parent answered 'English' to the first three questions and 'Pilipino' or 'Pilipino and English' to the fourth, the child would be classified as having Pilipino as his or her home language.
Such a response profile is not uncommon. Nor is it uncommon for the response to Question 2 to be 'English' and to Questions 3 and 4 to be 'Spanish'. Adults often continue speaking their native language in a new country long after their children start using the new language as their preferred language. Often children will answer parents in English even though the parents speak to them in another language.

This type of exchange was common in both our homes. Burt's parents spoke Dutch to each other and to their children, but her younger sister and brother would answer their parents in English. Burt, the oldest girl, spoke Dutch to her parents and English to her younger sister and brother.

Dulay's home language situation illustrates yet another common occurrence in bilingual families. While her first languages were Spanish and Tagalog, these languages became her weaker languages shortly after she started school (conducted in English), although the adults in the family continued speaking three languages in her home.

In a study of bilingual education practices in California, Development Associates (under contract to the State of California) found that if Question 4 of the Home Language Survey is the only item where parents indicated that a language other than English was spoken, the child is generally a fluent English speaker. Development Associates (1979) thus recommended that Question 4 be dropped from the Home Language Survey.

The concept of home language is multifaceted. Because the criteria used to determine home language may vary significantly, one cannot assume that students themselves speak the language designated as their primary or home language. It becomes necessary, therefore, to assess the student's actual proficiency in the home language to determine whether the student speaks it fluently.

Program suggestions. Relative proficiency assessments yield three groups of LEP students: primary-language-superior, English-superior, and comparably limited students. There is general consensus, at least in educational policies throughout the country, that two major educational goals should govern instructional approaches for all three groups. Programs should at least aim to enhance the student's academic achievement and should improve their English language skills. The programmatic suggestions outlined here address these goals.

While the program goals for all three groups are the same, the shape of the program for each varies; each group has different linguistic characteristics and correspondingly different instructional needs.

1. Program suggestions for primary-language-superior LEP students. This group of students is the one that most people think of when they think of programs for LEP students.
Students whose English skills are limited and whose skills in the home language are stronger should be given the opportunity to learn the basic academic subjects in their home language in addition to special English (second language) instruction. Such an instructional approach removes the handicap under which non-English-superior students would be working if they were to receive academic instruction through English.

This approach assumes that the program is implemented with qualified teachers, adequate curriculum, and sufficient instructional materials, so that instructional quality is assured. If staffing, curriculum, or materials are inadequate, the advantages of instruction through the student's stronger language may not be realized; they would be outweighed by the disadvantages of inadequate program implementation.

This approach is consistent with the transitional bilingual education program defined in the *Lau Remedies*, although it need not be transitional to work. If students are permitted to continue developing their home language after they have become proficient in English, the approach recommended earlier would no longer be transitional. Such a choice should be made jointly by the students, their parents, and school personnel.

In our work for the California State Board of Education and the California legislature, we called the type of program suggested here a 'core bilingual' program because it can be implemented within either a transitional or a maintenance context, and because the academic core of the curriculum is taught in the student's home language. Nonacademic subjects such as music, art, and physical education should be taught in English to provide the students opportunities to attend classes with native English speakers and thereby promote their acquisition of English and bicultural skills.

Although it is possible to conduct successful academic classes using both English and the home language as mediums of instruction, such an approach is extremely difficult. We would recommend instead using only the home language as the instructional medium in basic academic classes for non-English-superior students, until the students are ready to begin the transfer into English medium instruction. Thus, students would spend about half a day in English-medium classes and half a day in classes taught through their native language. This would entail student grouping by language superiority for basic academic classes.

We have presented detailed rationales for this recommendation elsewhere (Dulay and Burt 1978, 1980; see also Nadeau 1979). In brief, teaching academic subjects through the stronger language maximizes the probability that classes will hold the students' attention; it prevents dilution of the time spent on conceptual learning; and it is easier on teachers who would not have to deal with teaching both concepts and English at the
same time, a practice that often results in inadvertently giving students conflicting feedback on their performance.

If the home language is used as the medium of academic instruction, English second language classes become the vehicle for teaching technical vocabulary. ESL classes, therefore, should be articulated with the subject matter curriculum so that technical vocabulary in English is taught. A short transition period where English is the medium of academic instruction may also be useful before the student is transferred to a regular English-medium subject matter class.

In sum, the general program features we would recommend for non-English-superior LEP students are: (1) basic academic instruction through the home language; (2) English second language instruction which is articulated with the subject matter curriculum; (3) nonacademic subjects such as art, music, and physical education taught through English and taken with native English-speaking students; and (4) a transition period in which academic subjects are taught through English before the student transfers to the regular school curriculum.

2. Program suggestions for English-superior LEP students.

This group of students has been largely overlooked by educational policymakers, researchers, and curriculum developers. There is no research to assist in program development for these students, nor is there much discussion of the problem by educational practitioners. Following the same general rationale used for non-English-superior students, however, broad outlines of a program can be recommended.

Since these LEP students' stronger language is English, it follows that they would suffer less of an academic handicap if the academic curriculum were taught in English rather than in their home language. Their underachievement in English, however, would necessitate special instruction to promote English language development. Such instruction would be different from the regular English language arts curriculum. Techniques would be drawn from a variety of methodologies, including English second language instruction, English as a second dialect, and remedial English.

Since English-superior students are underachieving in English language skills, subject matter teachers of these students should be aware of the special English needs of their students so that problems in English do not get confused with problems in conceptual learning. If teachers knew of their students' language problems, they might make a special effort to use more visual teaching techniques than they otherwise might have.

Part of a program for English-superior LEP students might also be a class designed to develop their home language skills. Such a class would not be using the home language to facilitate conceptual learning (as is done in programs for non-English-superior students). Its aim would be that the students learn
the home language. Pedagogical techniques that teach second language through teaching content may, of course, be used in such a class. The ultimate goal of the class, however, would be primary language acquisition rather than content learning.

The decision to include such a component should rest with the students, their parents, and the teacher. The resources of the school would also play an important role. If a bilingual program for primary-language-superior students were operating, it would be fairly easy to extend the resources of that program to implement the primary language component for English-superior LEP students. The existence in the school of a foreign language program that included the target language would also facilitate the inclusion of this component in the program.

As mentioned earlier, little is known about the specific learning needs of this LEP subpopulation. While we await researchers' findings, it seems that we should at least make sure that the students' stronger language—English—is used as the medium of academic instruction and that they receive special English instruction. Further, if the community and the children's parents are oriented toward bilingualism, schools should make an effort to provide opportunities for children to revitalize their native language.

3. Program suggestions for comparably limited students. The students for whom it is most difficult to develop even the broadest outlines of programmatic recommendations are the comparably limited students. They do not demonstrate superiority in either language, and they underachieve in both.

Some educators feel that comparably limited students should be taught academic subjects in the home language because it would allow home support for the students' school work and may provide a boost for the students' self-esteem. Others recommend English-medium instruction because English is the language the students will ultimately have to master to succeed in the United States job market.

Educators have not generally recommended a dual language approach to academic instruction for these students for several reasons. Some children who are limited in both languages exhibit difficulty in using language in general. Thus, it is thought that they should not be made to deal with two languages when learning concepts.

Other children in this group speak a language variety resulting from a combination of the primary language grammar and a slice of the English lexicon (see, for example, Acosta-Belen 1975). Many of these children are not proficient in either English or Spanish, but may be proficient in a third language system. Although such a system is cognitively as valid and logical as either of the two source languages, most educators prefer to use standard varieties of English or the primary language, for social reasons. Looking ahead to the child's future,
most parents and educators also feel that children should become proficient in at least one standard language, and the school is the place to learn it. Still other children in this LEP subgroup—probably a very small minority—may have 'code-switched' during the testing, giving some answers in English and some in the home language, or they may have switched languages within a single response. Code-switching typically occurs when the speaker perceives his or her interlocutor to be bilingual, thus capable of understanding both languages (for a discussion of code-switching, see Haugen 1953; Gumperz and Hernández 1972; Dulay, Hernández, and Burt 1978; Dulay and Burt 1972; Dulay, Burt, and Krashen in press). Students who perceived that the tester was bilingual would feel free to code-switch in order to better communicate nuances of meaning. Such students are typically proficient in both languages; they have simply not demonstrated their abilities due to their misperception of the testing task. This problem is basically one involving testing procedures. It can be avoided by training testers to use verbal and nonverbal cues to make it clear to the student that during the testing procedure only one language should be used. Or school districts can use testers who are monolingual or superior speakers of the language being tested.

All in all, we are left with the decision regarding whether to use the home language or English as the medium of basic academic instruction for comparably limited children. (The language in which other components of the curriculum should be taught is not at issue here.)

Some, including ourselves, have recommended further testing to see whether tests other than the one initially used might yield a superior classification in one language (see Assembly Bill 690/1979 and California State Board of Education 1979). Such a procedure is costly, however, and may still yield inconclusive results.

In examining home language data, we discovered an alternative—or a supplement—to further testing in this situation: using the language the child speaks at home. This approach would be cost effective since schools already have that information by virtue of having conducted a home survey. It also enjoys some (though scant) empirical support.

As Table 2 indicates, students who demonstrate superiority in one language speak the language in which they are superior at home. In analyzing our home language data for Question 2 (the language the child speaks at home), we find that parents of about one-half of the equally limited children report that the children speak English at home, and one-half report that they speak Spanish.

Given the importance of continuity between home and school, it might be best to choose the language of instruction for comparably limited bilinguals on the basis of the language the child speaks at home (Question 2). Thus we would recommend
that comparably limited bilinguals who speak English at home would best be instructed in English, while those who speak another language at home might benefit more from instruction through that language. In either case, the students would additionally receive special English language instruction appropriate to their needs. Further, if parental choice, community orientation, and school resources permit it, students should be given opportunities to revitalize their home language.

As with the other groups, these recommendations assume that the type of program selected can be implemented properly. For with inadequate resources, the advantages of program design are eliminated and the program may even become detrimental to the student.

Some warnings. There will always be special circumstances that dictate program features other than the ones recommended here. Although each of the three special circumstances we are going to mention deserves much lengthier discussion, space constraints permit only brief comment.

1. Parental input. Parental dissatisfaction or disagreement with recommended program features should be taken into consideration. Education becomes much easier if schools respond to parents' goals and instructional preferences for their children. For example, many Korean, Vietnamese, and Filipino parents prefer English-medium instruction for their children, even if they are superior in their home language.

States have become responsive to the need for parental satisfaction with school bilingual programs and have included withdrawal, notification, information, and consultation rights of parents in their statutes (see California Reorganized Code, Chapter 7, 1977; Illinois Transitional Bilingual Education, Chapter 122, 1973; Texas Education Code Sub-chapter L, among others), proposed rules, or pending legislation.

2. School resources. School resources, too, must be considered before attempting to install new programs. It is often better to wait until teachers are properly trained, curriculum designed, and necessary materials procured before a program is implemented. Otherwise, its full benefits may not be realized and critical innovations may be scrapped before they can be implemented properly. Often it is better to settle, in the interim, for a less than ideal program design that can be implemented well rather than to attempt the ideal and be crushed by problems of implementation.

3. Children with exceptional needs. There are some LEP children who score at very low proficiency levels in both languages. If, for example, on a five-level proficiency test a student scores at Level 2 in one language and Level 1 in another, or at Level 2 in both, one may assign the student to a
relative proficiency category, but such assignment is programmatically meaningless. Such students have demonstrated performance below the normal range and cannot be treated as normal English-superior, primary-language-superior or equally limited students are treated. Using the Bilingual Syntax Measure I (1975), for example, children who score at Level 3 or lower in both languages, regardless of relative proficiency, are not counted under any of the relative proficiency categories but are identified as needing 'special diagnosis'.

Even if such students are placed in the best designed and implemented programs, they may fail without more specialized help. Further assessments to probe speech, hearing, or language disorders, mental retardation, or emotional disturbance must be made in both languages to determine the students' needs.

At the other end of the performance scale are primary-language-superior LEP students who have recently immigrated to the United States and who have enjoyed a good education in their home countries. Often these students have surpassed their Anglo-American grademates and do not benefit much from grade-level academic instruction in their own languages. Acquiring English skills is their major need. Thus, intensive English second language instruction, combined with selected subject matter and/or nonacademic classes taught through English may be most appropriate. Such students may also benefit from an advanced language arts class in their native language, appropriate to their level.

Summary. The recommendations made in this paper comprise an appeal for greater variety in designing bilingual programs, less legal rigidity in mandating home language instruction, better matching of program features to student characteristics, the inclusion of parental input, and serious consideration of implementation factors when planning programs.

We have found that limited English proficient students are not a linguistically homogeneous population; they comprise at least three relative proficiency groups and two groups with exceptional needs. LEP student diversity was the basis of the bilingual education conceptual framework passed by the California Board of Education in April, 1979; it was the basis of California Assemblyman Richard Alatorre's attempt to improve the state's bilingual legislation (Assembly Bill 690/1979), and it is central to the proposed Lau regulations pursuant to Title VI of the Civil Rights Act (U.S. Department of Education, 1980). If we care about the academic needs of language minority students, we cannot but channel our energies toward creating a selection of program options that are sensitive to their various needs and goals.
NOTES

This research was supported in part by a contract to Bloomsbury West from the California State Department of Education in 1979. We are grateful to Starrett Dalton, Administrator, Department of Research and Evaluation, Riverside Unified School District, for his assistance in aggregating the data.

1. Although Lerea and Laporta also report that their monolingual subjects learned visual stimuli in fewer trials.

2. The terms 'home language' and 'primary language' have been used synonymously in much of the contemporary bilingual education literature. For example, 'primary language' is defined in California law as the language the student first acquired or the language spoken in the home (California Education Code, Section 52163(g)). Similarly, 'primary-language-superior' is synonymous with 'non-English-superior'; and 'comparably limited' is synonymous with 'equally limited'.

3. In this paper, the term 'limited English proficient' includes children who are 'non-English speaking' (NES) as well as those who are 'limited English speaking' (LES). It can also include those who are limited in English reading and writing skills if tests measure those skills.

4. Not yet released.

5. This study estimated that there were 3.6 million LEP children in the United States in 1978.

6. Programs for LEP students may, of course, have other goals, such as the maintenance or revitalization of the student's home language. These are also important, but they enjoy less general public consensus.

7. This approach does not preclude the teacher's accepting the student's use of a nonstandard or mixed language variety. The teacher simply uses the standard variety herself.

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BILINGUALISM AS A FACTOR
IN THE TRAINING OF INTERPRETERS

Margareta Bowen
Georgetown University

For both interpreter and translator training, one of the most frequently asked questions concerns bilingualism: is it necessary, is it desirable?

To answer this question adequately, we must understand the term as used by professional conference interpreters. All too frequently, the layman and the student see it as a purely quantitative expression, meaning 'someone knows two languages'.

We need a qualitative approach to evaluate the quality of performance. All too often it is overlooked that the language professions call for a level of performance not found, as a matter of course, in the population at large. If it were, everyone in United States colleges would be in honors English; but we all know that college students will place at all levels of English, from honors to remedial. Experts may disagree on the methods of testing and placing native speakers of English; they may argue about the justification of individual evaluations and deny the value of a normative approach. Nevertheless we observe a very large population which encompasses monolinguals as well as persons who know several languages; their educational background has many features in common and yet there are these differences in language performance. These observations justify the assumption of a natural spread of language performance in the population. Shifts may occur as a result of modified teaching and testing methods.

Ontogenetically, studies of language acquisition have given us the term 'compound bilingualism' to describe the individual who was raised, from infancy, understanding and speaking two
languages. What is of interest here is the direct acquisition of two languages, neither being the medium for learning the other. Simple observation of the first generation of conference interpreters pointed towards a prevalence of such cases. In the following generations of interpreters, however, we find a great number of cases of languages learned later in life, even after adolescence.

At this point, we must introduce the AIIC language classification system. The International Association of Conference Interpreters (AIIC) makes a distinction between A, B, and C languages. The A language is the native language; the C language is a language which the interpreter must understand perfectly; it is the language from which he interprets into his A, sometimes into his B language. The B language, while not his mother tongue, is a language in which he can express himself with great ease and accuracy. The interpreter with two A languages has been described as the 'true bilingual' in a detailed study by Thiery (1975). His exact definition is the following: 'A true bilingual is someone who is taken to be one of themselves by the members of two different linguistic communities at roughly the same social and cultural level.'

Any research effort on a group of interpreters is hampered by the small numbers in such groups and the heterogeneity of the population. Thiery's sample consisted of 34 conference interpreters with a double A rating in English and French. Only 32 gave their age: in 1974 their average age was 48.2 years; the oldest member of the group was 64, the youngest 34. The common traits observed were that with one exception, all were compound bilinguals or had acquired their second language before puberty, without using their first language as the intermediary.

Thiery's observations concentrate on the first generation of interpreters. Since this generation started interpreting when few international meetings used more than two languages, bilingualism was very important from a practical point of view: the client preferred bilingual interpreters. He still does, albeit under different circumstances: high level negotiations, exotic venues, or whenever flexibility in team assignments is of prime importance. The AIIC Schools seminar held at Georgetown University in April, 1979 confirmed that this situation still exists. A glance at AIIC figures, however, shows that the number of true bilinguals in the profession is not increasing in the same proportion as membership as a whole. From 1973 to 1980, the total number of conference interpreters in AIIC has increased approximately 68 percent, but the total number of true bilinguals for English and French increased only 20 percent. We know that this difference in the growth rate is not explained by the marketplace. No observable differences in the recruitment patterns of new AIIC members explain this change. The only plausible explanation is a
change in the educational system of the countries concerned and in the values of our societies.

If we take another look at the general population, we can pragmatically distinguish between levels of language performance corresponding to education and language faculty. A rough approximation would give us the Figure 1 curves for the monolingual, solid line only.

**Figure 1.**

![Figure 1](image_url)  
Performance level of professional editor, public speaker, translator, interpreter in target language.  
Educated adult's performance level  
Child's performance level  
Infant's performance level  
Age, by increments of 10 years

During childhood and early adulthood, language performance improves, then remains more or less on a plateau during adulthood; with advancing age a certain drop must be expected as a result of subject's physical condition (a stroke would be an extreme case). The compound bilingual who also remains a balanced bilingual would show completely parallel curves for the two languages. Interpreters with a double A rating would show such an overall parallel curve extending to the highest area of professional performance. In one instance known to the author, this performance also includes translating literary works from French into English or vice-versa, and original authorship of fiction, nonfiction, and poetry in either one of the two languages (see Figure 2).

As soon as we distinguish between components of language performance, these simple curves would no longer give an adequate reflection of this development: phonology, grammar, lexicon, and style would have to be followed separately.
Thiery, in dealing with the differences in the lexicon of his sample of bilingual interpreters, concluded that it is practically impossible for any individual to have an identical life experience in both languages. One may have practiced sailing only with English speakers, but the piano teacher was French, etc. Such differences in specialized vocabulary have to be offset by extra effort on the part of the bilingual. Style may be improved by practice or through courses in editing. Separate curves for these components would therefore show a number of oscillations.

Differences between the components of language performance are still more marked in the case of learned languages. The high school or college student may, in exceptional cases, master the accent of the foreign language almost as rapidly as the child when acquiring its native language, but he will not go through the same stages in learning grammar and vocabulary. No effort at immersion will make the teenager repeat the total learning experience of the first 12 years of life. Again, when trying to give a graphic representation, we can only indicate a point X where learning may reach levels comparable to those of the monolingual learner. Often, grammar and vocabulary will never be learned well enough to achieve an ability to choose style. If the coordinate bilingual reaches the level of an educated adult, there is likely to be a gap between the overall performance in his dominant and his second language.
Figure 3 shows the curves that would correspond to a combination of Language A (solid line) and language B (dotted line).

Figure 3.

| Performance level of professional editor, writer, public speaker; translator or interpreter in target language. |
| Educated adult's performance level. |
| Child's performance level. |
| Infant's performance level. |

Age, by increments of 10 years

Individual curves will not necessarily present the regularity shown here. Depending on life experience, compound bilinguals may develop a gap instead of remaining balanced. Coordinate bilinguals may observe, in their own performance, changes in the rank of their languages (one case is known of a professional translator whose dominant and second language became reversed). The gap between the first and the second language may stabilize at a certain level, or it may vary throughout the subject's professional life, depending on his work and needs to maintain his language performance. Most subjects reach a certain plateau in the way they pronounce their second language and any progress beyond that plateau then becomes increasingly difficult. As Dr. Delisle has pointed out, the translator's job does not require perfect pronunciation of the language from which he works. This is also true for the interpreter who works from several C languages into his A language.

Variations in time can even be observed clearly in the relatively young population of candidates taking entrance examinations at Georgetown University's Division of Interpretation and Translation. Six such examinations are administered and about 100 candidates are examined every year. As a result of
this selection process, the population in the interpretation class for the two-semester course is about 12 or 15. The largest class ever was 24. The average age of these groups is close to 30, the youngest members being 21, the oldest rarely over 40. About half the number of candidates seen think that they are bilingual. Very few are true bilinguals. We try to find out how, when, and where they learned their languages, and whether they moved from one language community to another. If moves have been frequent, there may be language erosion or variations in quality. Being a compound bilingual is a matter of fate, and does not always lead to high performance levels in any language. One can, however, agree with the title of one of the papers at this George-town University Round Table: 'The monolingual child is under-privileged'. He is underprivileged because he is deprived of the opportunity to reach high performance levels in two languages at the same time. He is deprived of the opportunity to acquire a basis that cannot be achieved in later life. However, bilingual countries do not necessarily provide the best environment. Often the two languages have become so similar to each other that they differ only in vocabulary. It would be more accurate in such cases to speak of "bivocabularism" rather than bilingualism" (Seleskovitch 1978).

What can we conclude from these observations of different populations? Whatever definition of bilingualism we adopt, there is some indication that circumstances alone do not produce bilingualism with top level performance. They will, in some cases, favor such performance but they will not produce it. We may have to go back to the concept of the 'bosse à interprète'--the special twist in one's brain--in search of an explanation. During the beginning years of the interpreting profession this was a widely accepted 'guesstimate'. Studies of bilateralism in ensuing years have not given consistent information. Studies of accident victims and subjects undergoing brain surgery have brought some isolated items of information (Geschwind 1979:180), which point towards a physiological component in language performance. In the case of one persistent dyslexic, an abnormal cellular architecture was found in Wernicke's area of the cortex. A single case is not conclusive, but it certainly deserves our attention, considering that to some extent dyslexia can be overcome through training.

If we now go back to the initial questions, we should at least temper the enthusiasm for bilingualism in interpreter training. While there may be excellent reasons for continued demand for bilingual interpreters--especially the about-to-be implemented Bilingualism in Courts Act--no amount of wishful thinking will change the fact that true bilingualism is becoming rarer. Only developments in our educational system are likely to promote true bilingualism. Considering the natural spread of language performance in any given population, there need
be no fear that a bilingual system would raise only interpreters and language professionals.

The prospective interpreter who does not have the basis of true bilingualism should be advised to invest his time, money, and effort more wisely, by improving his C languages and possibly adding another.

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Le traducteur est-il un bilingue au sens courant du terme? Sur quels critères faut-il s'appuyer pour évaluer son bilinguisme? Répondre à ces deux questions est indispensable pour orienter la pédagogie de la traduction professionnelle et ne pas assimiler les cours pratiques de traduction à de simples cours d'acquisition d'une langue seconde.

Beaucoup de profanes croient, en effet, qu'il suffit de connaître deux langues pour être en mesure de traduire. Cette conception simpliste explique en partie l'imposture dans laquelle se placent de nombreux faux bilingues qui s'immunisent traducteurs professionnels en se croyant aptes à pratiquer d'emblée ce métier. La création d'Écoles de traducteurs à travers le monde depuis une trentaine d'années est une reconnaissance implicite du fait que le bilinguisme n'est pas suffisant pour donner à quiconque une compétence de traducteur.

Le bilinguisme. Le bilinguisme est un phénomène complexe qu'il n'est pas facile d'étudier ni de définir. On craint en le décrivant de donner une définition trop générale ou abusivement restreinte. Bilinguisme et traduction sont proches parents: tous deux sont une manifestation du contact des langues résultant de la communication entre groupes linguistiques. Tout comme la traduction, le bilinguisme souffre de se trouver à l'intersection de plusieurs disciplines sans être considéré comme objet propre d'études par aucune d'elles. C'est sans doute pourquoi il est encore relativement mal connu tout comme la traduction. La psychologie, la sociologie, la linguistique, la psycholinguistique et la sociolinguistique sont autant de sciences susceptibles d'éclairer ce phénomène universel.

Les deux grands types de bilinguisme, individuel et social, ont reçu des dizaines de définitions. C'est le bilinguisme
individuel qui nous intéresse dans le contexte de la traduction, car il suppose la cohabitation de deux langues chez une même personne. La plupart des auteurs définissent le bilingue comme une personne capable de s'exprimer dans une langue seconde. À la notion de bilinguisme est rattachée implicitement, mais non exclusivement, celle de compétence orale: le bilingue est perçu d'abord comme une personne capable de parler avec plus ou moins d'aisance une langue autre que sa langue maternelle. Le bilinguisme du traducteur échappe donc à des définitions comme celles-ci: 'Bilingual: speaking two languages interchangeably. The ideal form of bilingualism is when both languages are spoken equally well for all purposes of life'.  

La personne bilingue est celle qui peut parler 'dans l'autre langue par opposition à celle qui ne ferait que comprendre une autre langue'. Jules Marouzeau définit quant à lui le bilinguisme comme 'le fait de quelqu'un qui se sert couramment de deux langues, sans aptitude marquée pour l'une plutôt que l'autre'. Ces quelques définitions confirment plus ou moins l'opinion communément répandue selon laquelle on ne sait une langue que si on peut la parler.

Bilingue et traducteur. La connaissance dite active d'une langue étrangère n'est pourtant pas une exigence sine qua non de la pratique de la traduction; elle n'en est pas non plus un empêchement! Il est même très utile que le traducteur puisse parler la langue de laquelle il traduit, car il est souvent obligé de communiquer avec l'auteur du texte étranger pour obtenir des éclaircissements, des précisions indispensables à sa compréhension. Il lui faut donc pouvoir s'exprimer dans la langue du client. Mais cette exigence est liée à l'exercice de la profession de traducteur et non à l'activité traduisante proprement dite, c'est-à-dire au processus intellectuel de transfert sémantique d'une langue à une autre.

En schématisant, on peut dire que le plus souvent, le bilingue se sert de sa connaissance d'une langue seconde pour communiquer oralement, tandis que le traducteur place cette connaissance au service d'un rédacteur et d'un lecteur qu'il met en communication par l'intermédiaire d'un texte. Dans l'exercice de son métier, le traducteur n'élabora jamais spontanément une pensée personnelle et n'émet pas d'idées qui lui sont propres; il n'a pas la liberté d'articuler à sa guise les pensées qui lui sont livrées sous une forme écrite.

Le travail du traducteur professionnel qui normalement devrait toujours traduire d'une langue étrangère vers sa langue maternelle, se limite à redire ce qui a déjà été dit. Le traducteur est donc un 'bilingue récepteur' puisqu'il n'est pas appelé
normalement à produire dans sa langue seconde le message qu'il traduit dans sa langue maternelle.

Le bilingue aurait donc une connaissance de performance complète de la langue seconde, alors qu'une connaissance de compréhension suffit au traducteur. Celui-ci n'a pas à être un 'bilingue vrai' au sens où l'entend Christopher Thiery. Responsable de la section interprétation de l'Ecole Supérieur d'Interprètes et de Traducteurs de Paris, Christopher Thiery vient d'être nommé interprète officiel du Quai d'Orsay, ce qui en fait l'interprète personnel du Président de la République française. Dans une thèse de troisième cycle intitulée Le bilinguisme chez les interprètes de conférence professionnels, il définit en ces termes le bilinguisme vrai: 'C'est le fait pour un individu d'être pris pour un des leurs par les membres de milieux socio-culturels équivalents de chacune des deux communautés linguistiques auxquelles il appartient'.

Le traducteur peut faire l'économie, si l'on peut dire, d'une connaissance orale de la langue du message original à la condition expresse que sa compréhension des formes écrites de celle-ci soit totale. Son activité portant essentiellement sur l'écrit, on voit mal comment le fait de parler couramment une langue seconde le rendrait plus compétent à traduire. Il est rare, cependant, que l'on sache parfaitement une langue sans avoir séjourné dans le pays où cette langue est parlée.

Le bilinguisme du traducteur se caractérise encore et surtout par l'aptitude à maintenir intactes deux structures linguistiques en contact. La traduction est un cas-limite de contact des langues, celui où la résistance aux conséquences habituelles du bilinguisme est la plus consciente et la plus organisée; le cas où le locuteur bilingue lutte consciemment contre toute déviation de la norme linguistique, contre toute interférence'. Pour évaluer le bilinguisme du traducteur, il serait non pertinent de mesurer l'étendue de son vocabulaire, sa connaissance de la grammaire ou de l'orthographe et encore moins son aisance à s'exprimer en langue seconde. C'est par son aptitude à dissocier deux langues en contact que le traducteur révèle sa connaissance de celles-ci, la maîtrise de son métier, et qu'il se distingue du bilingue au sens courant du terme.

Le bilingue équilibré qui s'exprime spontanément dans une langue étrangère ne traduit pas. Il ne formule pas son message dans une langue pour le transposer ensuite dans une autre. Autrement dit, il ne recourt pas au signifiant/signifié de sa langue maternelle pour atteindre le signifiant/signifié de la langue seconde. Il mobilise directement pour chaque langue des moyens d'expression différents. Dans l'acte de traduction, par contre, l'appréhension des concepts passe forcément par le signifiant/signifié de la langue originale que le traducteur a sous les yeux. C'est la nature même de la traduction qui l'exige.

L'écrit rendant impossible la spontanéité d'expression, le bilinguisme du traducteur est forcément 'conscient et organisé'.
C'est une des raisons pour lesquelles la pratique de la traduction exige, même d'un bon bilingue, un apprentissage. 'Facility in translation', a écrit B. Kirstein, 'is not easily come by... Even a bilingual may find it difficult to translate if he has not previously been trained for it'. Hilaire Belloc s'est même demandé 'whether a bilingual person has ever been known to make a good translation'.

L'apprenti-traducteur. Il est assez facile de diagnostiquer la cause de bon nombre d'erreurs des apprentis-traducteurs: subissant trop fortement la tyrannie des formes étrangères, leur interprétation des énoncés d'un message est incomplète ou fautive et leur analyse contextuelle insuffisante. Leurs traductions restent asservies aux mots et aux structures de l'original. Cette propension au transcodage s'explique par le fait que l'effort mental exigé par une traduction littérale est bien moindre que celui qu'impose une traduction réfléchie. La présence des signes étrangers du texte original gêne la spontanéité de réexpression chez le bilingue qui n'est pas rompu à la gymnastique intellectuelle du transfert interlinguistique. En début de formation, l'étudiant se trouve dans une situation comparable à celle de l'élève en début d'apprentissage d'une langue étrangère. Tous deux doivent s'habituer à se libérer de l'emprise des structures d'une autre langue: le premier, des formes de la langue originale, le second, de celles de sa langue maternelle. Dans les deux cas, il leur faut apprendre à ne pas mettre en relation des structures de surface.

La performance du traducteur s'exerce indirectement sur la langue originale et directement sur la langue d'arrivée. Par conséquent, le bilinguisme du traducteur se caractérise par un savoir de compréhension de la langue seconde, une connaissance active des formes écrites de la langue d'arrivée et l'aptitude à dégager le sens d'un texte. Traduire est un savoir-faire (interpréter et réexprimer) qui repose sur un double savoir (linguistique et encyclopédique).

La démarche du traducteur est sémasiologique/onomasiologique. Traduire consiste, en effet, à dissocier mentalement des notions de leurs formes graphiques afin de leur associer d'autres signes puissés dans un autre système linguistique. L'extériorisation des idées ne peut donc avoir lieu que consécutivement à leur compréhension, alors que dans une énonciation spontanée, les signes linguistiques se jumellent inconsciemment et plus ou moins instantanément aux notions formulées. Cela explique qu'on ne traduit pas des textes à la vitesse de la lecture ni de l'audition. La traduction suppose une double réflexion.

En simplifiant le mécanisme de la pensée et de son expression chez le bilingue (équilibré) et le traducteur (professionnel), on peut représenter le rapport entre les concepts et le discours de la façon suivante.
### Tableau 1.

<table>
<thead>
<tr>
<th>Bilingue (équilibré)</th>
<th>Traducteur (professionnel)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Signifiants</strong> $L_1$</td>
<td><strong>Concepts</strong> (à réexprimer)</td>
</tr>
<tr>
<td>Concepts (à exprimer)</td>
<td><strong>Signifiants du TD</strong></td>
</tr>
<tr>
<td><strong>Signifiants</strong> $L_2$</td>
<td><strong>Signifiants du TA</strong></td>
</tr>
</tbody>
</table>

Codes: $L_1$: langue maternelle; $L_2$: langue étrangère; TD: texte de départ; TA: texte d'arrivée

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L'essentiel de cette communication est tiré d'un ouvrage qui vient de paraître aux éditions de l'Université d'Ottawa intitulé *L'Analyse du discours comme méthode de traduction. Initiation à la traduction française de textes pragmatiques anglais. Théorie et pratique.* (Cahiers de traductologie no 2, 1980, 282 p.)


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LANGUAGE MASTERY THROUGH SELF-INSTRUCTION ABROAD

Daniel Birnbaum
La Sorbonne

The consensus of enlightened translators and conference interpreters is that bilingualism, by any definition, is far from the sole criterion of professional competence. General education, familiarity with the subject of the text at hand, ease and felicitousness of expression in the mother tongue, intellectual acuity, poise, and a quantum of Sitzfleisch are also acknowledged requisites of the interpreter's and translator's trade. Nevertheless, it is precisely in the linguistic skills undergirding translation that applicants for admission to schools for interpreters and translators are so often found wanting (Keiser 1978). This paper considers, initially from an American perspective, why this is so and what can be done about it.

Reputable schools for interpreters and translators insist that training in language and training in translation do not mix. The candidate is expected to know his languages thoroughly at the time of entrance, and any additional language proficiency garnered through translation or interpretation courses is merely a by-product of the instruction offered, not its goal (Keiser 1978). Yet formal language instruction for American collegians almost always ends prematurely with the so-called 'conversation class'. The literature or linguistics courses that complete the American language major's program may also lead to progress in language learning; but such improvement, as in the case of translator and interpreter programs, is neither the aim nor the primary result of literary study or abstract linguistic reflection. The Spanish major who seeks to work with language as an end, and not only as a means to an end, is commonly shuffled off to Spain for a time. Dining with his host family, he usually manages to apprehend the Spanish for 'pass the paella' and 'so's your old man', but sits wordless when the table talk turns to international affairs or even to Uncle Pepe's double hernia.
His college instructors have simply not taught him how to
master complex language in informal foreign settings. Indeed,
the recent literature of applied linguistics boasts only one
essay on the subject, that of a German conference interpreter
(Dejean Le Féal 1976) who writes to combat the myth of os-
mosis—the erroneous and widespread notion that one 'soaks
up' the fine points of a language while abroad without deliber-
ate effort. Naturally, this myth of osmosis is of no concern to
casual tourists or linguistic dilettantes. But such shallow or
whimsical achievement as the unguided language major may show
upon his return from a linguistic pilgrimage is unlikely to im-
press the demanding examiners at institutes for interpreters
and translators. What follows here is the outline of a program
of extramural self-instruction for interpreters and translators
during a period of residence abroad. Where possible, I have
tried to avoid overlap with Déjean Le Féal's essay, and I have
also attempted to make my suggestions more vivid by document-
ing them with examples drawn from my own experience.

Attitudes and objectives. The linguistic pilgrim's progress
depends in large measure on the clearheadedness that he brings
to his venture. Thiéry (1975) has established that second-
language learning cannot lead to 'true bilingualism'. To be a
fully bilingual adult, one must have been a fully bilingual child.
In other words, the post-pubescent, corn-fed American is
physiologically incapable of acquiring a second mother-tongue.
This point needs to be made most emphatically, if only because
nothing is so self-defeating as an unrealistic goal. The ad-
vanced student must distinguish between proficiency and per-
fecction, and resign himself to striving only for the former.

Another source of consternation for the advanced student
may arise out of the immemorial false assumption that rate and
ease of progress remain constant throughout the language-
learning process. 'To be gifted for languages', avers Henschel-
mann (1974), 'may be defined as meaning that the learner can
acquire a second or third language effortlessly and quickly,
and that he can speak it properly and almost as well as he
speaks his mother tongue'. ('Mit "Sprachbegabung" kann das
mühelos-rasche Erlernen und richtige, quasi-muttersprachliche
Sprechen einer Zweit- oder Drittsprache gemeint sein.')
A. Meillet is quoted by a disciple as asking: 'How hard is it
to learn a foreign language?' 'Not very. It's taxing only the
first time around.' After one or two languages have been
learned, Meillet is supposed to have opined, the next one
tackled is 'child's play'. ('Mon maître A. Meillet disait à peu
près: "Acquérir des langues étrangères? Il n'y a que la
première qui coûte." A partir de la troisième ou quatrième,
disait-il encore, "c'est un jeu d'enfant".')

Now it is true that one can learn to learn, and that any
industrious person of genuine linguistic endowment can master
the rudiments of a foreign language within a short time—but
only the rudiments. Except at the outset of advanced study abroad, when (as Déjean Le Féal has noted) the learner is so dazzled by novelty of sight and sound that his mind seems to absorb language in great rushes, the sprightly and prodigious leaps typical of the first years of language learning are no longer possible. As a beginner, the student of French gulped down quantities of ubiquitous personal pronouns (il), object pronouns (y), particles (ne/pas), prepositions (de), nouns (main) and adjectives (mort/e). None of these elements can stand alone, yet each is combinable with all the others in a variety of ways. But the advanced student abroad usually meets these units in prefabricated globs (il...n'y...va...pas...de...main...morte) that leave little room for alteration and allow limited range of application. The only way to work with these innumerable, more or less fixed expressions is to peck away at them, bird-like, one by one. This unavoidable, piecemeal approach is anything but quick and effortless, and it is hardly child's play.

Starting point. The sine qua non of language mastery abroad is a surpassing knowledge of basic grammar. The student who is still not comfortable with irregular verbs, the placement of object pronouns, or the agreement of adjectives will have more trouble than he needs to have with il n'y va pas de main morte. 'Tu conjugues très bien tes verbes', a French girl volunteered to me, when I had not been a week on French soil. Conjugating verbs and manipulating syntax were perhaps the only things I did well upon arriving in France, but they left my mind free to focus on improving my French in loftier ways.

What 'loftier ways'? Well, the advanced student abroad should be concentrating on meaning, that is, on understanding others and expressing himself. With the commonplaces of grammar behind him, he should turn his attention to the vaster, less malleable domain of vocabulary. Here it appears appropriate to allude to the distinction that interpreters and translators make between expression and comprehension or, in our jargon, between active or 'B' languages and passive or 'C' languages. The terms active and passive are somewhat misleading. Comprehension is never passive—the brain is not asleep—and the interpreter's or translator's 'B', if he has one, might more accurately (though pedantically) be labeled an 'active-passive' language. He is capable of translating both into it, and from it into his mother tongue or 'A' language. Comprehension of a foreign language is therefore a goal for all interpreters and translators; expression is a goal only for some. Little need exists to distinguish speech from print, however. The fledgling translator should prepare himself while abroad for work that may require a feel for the spoken language, and the prospective interpreter cannot afford to ignore the denser, written language typical of texts provided for sight translation at many conferences.
Comprehension. Zeroing in on written language that one has not understood is comparatively easy, but bringing the mysteries of uncomprehended speech into focus is annoyingly difficult. Verba volant. How does one arrest the flow of words in conversation without pester ing one's interlocutor to distraction? The answer is fourfold:

(1) While abroad, the advanced student must seek to exchange conversation with educated, like-minded native speakers as often as possible. The understanding must always be that either may interrupt the other to pinpoint and untangle a phrase perceived only as a blur of words.

(2) Fleeting speech may be made tangible and permanent by means of note-taking. Scripta manent. The student must develop the habit of scribbling expressions that he hears, not only during arranged conversations, but also in impromptu encounters, on buses, and in public places. The context and situation should be noted as aids to clarification and memory. 'Quel est votre itinéraire?' a female cab driver said to me when I asked her to take me to a train station during my first stay in Paris. 'Any special route you want me to take?' I had not known that itinéraire could be used in this fashion, and the bald phrase 'Quel est votre itinéraire?' might have puzzled me, as I looked back at my notes days or weeks later, had I not also taken down the circumstances of its occurrence, including the linguistically irrelevant but memorable gender of the cabbie.

(3) Opportunities occasionally arise for steering ordinary conversation to pedagogical ends. As a slimy salesman completed his spiel to my wife and me in a student cafeteria, a French woman across the table from us muttered something at the man's retreating back that included the word baratin. 'How's that again?', my wife and I blurted at the woman in French. The reward for our initiative was an entertaining disquisition on the meaning of baratin. Some native speakers are delighted to escort recognized foreigners around linguistic potholes. When such help is not immediately forthcoming, it can be encouraged. 'I'm very sorry', the student may say, when he feels the need to ask a native to repeat himself, 'I'm an American trying to learn your language as well as I can. Would you mind running that last sentence by me again?' (If the native speaker fails to respond to so endearing an entreaty, he may be written off as a curmudgeon who should never have benefited from the Marshall Plan.)

(4) The student should record radio and television programs, replay the tape, stop it when necessary, and so isolate the source of his bewilderment.
Once the student has located deficiencies in his comprehension, he will naturally have recourse to reference works in his attempt to remedy them. But the future translator or interpreter should begin to wean himself from what Delisle (1978) has called school translation ('traduction scolaire'), or from what might less ambiguously be called dictionary translation: a rigid, structural equivalence that takes little account of context. The exercise that Déjean Le Féal recommends indirectly to this end is that of commuting ('faire la navette') from the foreign language back into the mother tongue. The learner should require himself to re-express foreign phrases in his mother tongue, irrespective of number of words or parts of speech. To do so, he must momentarily put the foreign words out of mind (cf. Seleskovitch 1968) and let himself be borne along by the context and by his background knowledge. When observing a Parisian bus rider who rises and says 'On descend' to a companion, the anglophone, easily projecting himself into the speaker's intended meaning, may mentally render it as 'Here's our stop', 'Here's where we get off', or in a hundred other plausible ways, including the cryptic 'This is it'. But the advanced student abroad needs to remind himself that when aspects of the situation are unclear, even the native is incapable of comprehension. The sentence *Les verts sont un dieu pour tous*, although manifestly French, is perfectly opaque to any francophone unaware that *les verts* are the nationally beloved soccer team of the town of St. Etienne. One must also know that, as a graffito, this apparent fragment is an entire text in itself. To understand its theological overtones, one must further know that I found *Les verts sont un dieu pour tous* humorously scrawled on the wall of a church. The point is that no foreign student should expect himself to grasp a molecule of language afloat in a vacuum of intelligence. Comprehension of expression depends at all times on comprehension of context (cf. Slama-Cazacu 1961).

**Expression.** Determining what one cannot yet say in a foreign language is often as difficult as nailing down comprehended expression. In the throes of conversation, the student—battling interference from his mother tongue—gropes for a phrase, does not find it, goes on without it, contents himself with an awkward approximation of his meaning, or else gratefully incorporates a fill-in proposed by his interlocutor. But even in the last event, there is no guarantee that the learner will retain the phrase supplied by the native speaker, since he cannot invariably break off conversation to record the happy find. One solution to this dilemma is the imaginary conversation. The student should talk to himself. He should imagine himself holding forth to the butcher, the baker, the candlestick maker, or, as his fancy dictates, to Jacques Cousteau, Valéry Giscard d'Estaing, or Catherine Deneuve.
He should take note of his hesitations as they arise, but he should not endeavor to eliminate them with dictionaries alone. The ultimate purpose of the exercise is to become increasingly conscious of one's gaps in order to plug them with language later snatched from actual communication. It was as a result of this procedure, for example, that I gradually became aware of how stymied I was whenever I wanted to express 'we might as well' in French. Dictionary equivalents seemed lifeless, almost bleak. Then, on an equally bleak day, I was admiring the cathedral in Amiens when a friend suggested that we return to his home for lunch even though the meal would not be ready yet. 'It's too cold to keep standing here', he said in French, 'autant y aller maintenant'. 'We might as well go now'. Imaginary conversation, on-the-spot translation ('faire la navette') and the striking site of the conversation (who could forget the Amiens cathedral?) have blended to make this match of 'we might as well go' with autant aller indelible in my memory—indelible, but not inflexible. The potential, contextual translations of 'we might as well' are unlimited. But the Anglophone lacks the ability to create French counterparts of 'we might as well', and so must accept willy-nilly and file away whatever he can cull from native speakers. That culling is the extraction, from a native's cascading speech, of unified expressions more than of isolated words. The point of fishing out the idiom à cœur joie, for example, is not to learn the words cœur and joie—which the advanced student should already know—but to hook on to a slippery chunk of French that the foreigner could never himself spawn, if only because of its grammatical anomalousness (i.e. the bizarre juxtaposition of two nouns). In the mother tongue, elegant speech calls for the avoidance of such hackneyed rhetoric. But in a foreign language, clever self-expression is the reliance upon clichés that one strings together in order to reduce error, clumsiness and floundering, and in order to sound authentic.

Choosing the native informant. Language adepts know that it is one thing to lasso a phrase as it bolts from the mouth of a native speaker, and quite another to ask the native to conjure up grammatical rules or other linguistic information. The native informant, with depressing frequency, is a native misinformant. The following are random examples of misinformation volunteered by educated native speakers of French.

(1) A French city planner shook his head at an American's use of a mauvais escient. 'You may say à bon escient', he intoned authoritatively. 'But à mauvais escient does not exist.' (A mauvais escient is alive and well in the Petit Robert dictionary.)

(2) A professor at the Institut de Phonétique thundered to her students that francophones never, never, never pronounce the -ais, -ait, -aient endings of the imperfect
and conditional otherwise than as /ɛ/, as in *frais*. (In fact, many well-spoken francophones sound them as /e/ as in *et*.)

(3) A French student interpreter 'corrected' an anglophone's *de manièère que* into *de manièère à ce que*. (The *Dictionnaire des difficultés de la langue française* smiles at *de manièère que* and frowns at *de manièère à ce que*.)

(4) A French lawyer revamped a foreigner's *peu me chaut* into *peu m'en chaut*. (Dictionaries give both.) The same informant 'rectified' *ce n'est pas sa faute* into *ce n'est pas de sa faute*. (The *Dictionnaire des difficultés de la langue française* considers *ce n'est pas de sa faute* to be substandard.)

Without pausing here to classify these errors or misassumptions according to type, one may posit two ways of dealing with opinions offered by native speakers. The first, as I have implied, is to check them against reference works. The second is to put the same question to several informants of demonstrated reliability, and to adopt the majority view as one's own, with a mind open to possible contradictions (alas) of that view by still other sources.

Accent. 'The chief value of money', wrote H. L. Mencken, 'lies in the fact that one lives in a world in which it is overestimated.' The same may be true of a lovely accent in a foreign language. The layman tends to judge the foreigner's mastery of a learned language according to the ear-pleasing or ear-splitting quality of his accent. Yet the translator, and the interpreter with no active foreign language, need not worry about accent; the interpreter with a 'B' language should perhaps give more attention to vocabulary and grammatical correctness than to melodiousness of speech. For the interpreter with French-B, however, the advice of 'professor' Henry Higgins to Eliza Doolittle is not without bite: 'The French don't care WHAT you say, actually, as long as you PRONOUNCE it properly.' Seleskovitch (1968) has observed that conference delegates often mistrust the interpreter initially, and a well-tuned accent can be a superficial but reassuring form of hinted complicity.

Loss of accent. Laymen like to say that a foreigner has or has not 'lost' his accent. But no foreign speaker can strip away an accent as an animal sheds a coat of fur. One does not 'lose' a bad accent; one laboriously acquires a better one. But how?

Phonetic echo. 'May thy ears hear the words of thy mouth', saith the Talmud. Yet speakers of a foreign language rarely hear themselves accurately, save through the agency of native speakers. This occurs generally in one of two ways: either
by corrections that the native volunteers, or by the foreigner's alertness to his pronunciation of a sound and the native's rendering of it. I call the latter phenomenon 'phonetic echo', and I have experienced it often enough to know how effective it can be, especially (but not only) when the native speaker happens to repeat a word that the foreigner has (mis)pronounced moments earlier. Having for years sounded the initial e as essentiel as /e/, I suddenly became aware, while listening to French radio, that a native speaker was saying /e/ as in et. A glance at a phonetics textbook showed me that this was neither a personal nor a regional quirk: an unaccented e in open syllables is pronounced /e/ as in et before all double consonants except rr (erreur). Here, again, the procedure is to verify one's own observation through reference works whenever possible (in the case of pronunciation, through phonetics manuals or dictionary transcriptions in the international phonetic alphabet).

Preparing for conversation. Seleskovitch (1968) has stressed the spontaneous, undeliberate nature of oral expression in the mother tongue. But in a foreign language, even the most accomplished speaker will run a collision course with error if he allows his mental motor always to cruise on 'automatic pilot'. The advanced student abroad needs to anticipate linguistic hazards that lie around the bend. He should attempt to make predictions about the language that he will require in an upcoming situation, and he should rehearse (aloud, if possible) the sentences that he foresees using. Though especially helpful in the early going when vocabulary is lacking, this tactic continues to be of service in the final stage of language mastery abroad, when consistent authenticity of expression is the aim.

I have just returned from an automobile dealer's in Paris where I took my car to be worked on. While my ticket was being prepared, I reflected that I was on the point of needing to say that I had left my keys in the car. After trying out several phrases in my mind—les clés sont dans la voiture, à l'intérieur de la voiture, etc.—I rejected them as erroneous or merely limp, and instead hit upon les clés sont dessus, because it sounded vaguely familiar. 'Les clés sont dessus?', the service writer suddenly asked me. Though robbed of a chance to shine, I had reason to be content with a francophone's confirmation of my intended utterance.

Conclusion. During the period separating formal instruction in a foreign language from admission to a school of translation or interpretation, the student should be developing habits that will see him through the transition and serve him well in his professional schooling and in his career. Experienced translators and conference interpreters will no doubt note a certain similarity between many of the exercises presented here and the everyday demands of their work. Learning from native
speakers through observation, note-taking, and repetition ('Quel est votre itinéraire?') can be a prelude to ferreting out uncommon vocabulary at conferences through strict attention to the speech of delegates. Preparation for anticipated conversation ('les clés sont dessus') can be an introduction to the manner in which the interpreter girds himself for highly specialized conferences. The search for a mother-tongue equivalent of a foreign phrase encountered in context ('on descend') is a useful warm-up for professional translation, and helps to prevent attrition of the mother tongue. The exchange of conversation can become an embryonic form of practice in consecutive interpretation, with the student re-expressing in one language whatever his partner has related in the other (relying only on memory, and postponing note-taking until properly instructed in that art by his interpretation professors). The would-be interpreter or translator who gives linguistic structure to his time abroad, and who turns daily communication into an apprenticeship for career translation, will surely increase his chances for admission to a selective school for interpreters and translators. He will fare better, certainly, than John Adams, second President of the United States but at one time ambassador to France, would have fared. 'There are two ways of learning French commonly recommended', Adams counseled an acquaintance: 'Take a mistress and go to the comédie.'

Would that it were so simple.

NOTES

1. A. Meillet's view of language learning is attributed to him by Professor Pierre Bertaux of the Sorbonne in the Le Monde, May 18, 1979.
3. The Henry Higgins remark is from My Fair Lady, the musical version of G. B. Shaw's Pygmalion.

REFERENCES

CURRENT STATE LEVEL TRENDS IN THE ASSESSMENT OF LANGUAGE MINORITY STUDENTS: AN INTRODUCTION

Heidi Dulay and Marina Burt
Bloomsbury West

In the last ten years, state agencies have taken an increasingly important role in developing policies and procedures for the education of language minority students in the United States. Before the landmark 1974 Lau v. Nichols decision, a number of states had already passed legislation mandating special educational services for students whose English abilities were limited. Among them were Massachusetts (1972), California (1972), Illinois (1973), and Texas (1973).

After the Lau decision was handed down by the United States Supreme Court and the Lau Remedies developed by the U.S. Office for Civil Rights (1975), many states revised—and are continuing to revise—their statutes or regulations to move closer to federal requirements. In 1976, for example, California specified bilingual education services for limited English-speaking students, making more specific the special services that had been required in the 1972 law. In 1977, Texas completed its state plan ('Texas State Plan for Bilingual Education') which also mandates bilingual education in the lower elementary grades. Many other states have done the same (see Irizarry 1978, and Bilingual-Bicultural Education: A Handbook for Attorneys and Community Workers 1978, for a complete survey of state laws governing the education of language minority students).

Despite the states' efforts to follow federal guidelines, local factors have influenced the characteristics of each state's statutes, resulting in policies and procedures that vary somewhat from state to state and with federal guidelines. Illinois and Massachusetts, for example, require bilingual education for limited English-speaking students in grades K through 12,
while Texas limits its bilingual mandate to the early elementary grades (K-3), and California and New York set the limit at grade 6.

The purpose of this set of papers is to give readers an overview of such state policies. For this series of papers, we focused on one area of state education policy: the language assessment of language minority students. ('Language minority' is synonymous with 'national origin minority', a legal term which refers to students whose first acquired language was other than English, or who live in environments in which a non-English language is usually spoken.)

Language assessment is the first step in providing appropriate instruction to language minority students. It determines which students would be at a disadvantage in English-medium classrooms and how proficient they are in their native languages. It thus determines their eligibility for publicly funded bilingual education and special English programs. Language assessment also plays a central role in determining which students are ready to transfer out of special programs to regular English-medium classes. In addition, it comprises a large part of 'minimum competency testing' efforts that determine whether students may be passed on to the next grade or graduated from high school.

States have recognized the critical role of language assessment and have devoted much time and expertise to developing policies to ensure adequate language assessment of students from non-English-speaking backgrounds. While much remains to be done, much has already been accomplished.

The states selected for the study (and for this panel) include the five states with the largest language minority population in the United States: California (5,221,000 students), New York (4,433,000 students), Texas (3,041,000), Illinois (1,473,000), and Florida (1,177,000) (statistics taken from the 1976 Survey of Income and Education conducted by the Bureau of the Census, summarized in National Center for Education Statistics, 1978). In addition, Massachusetts, the eighth ranking in language minority population (after New Jersey and Pennsylvania) was chosen because it was the first state to pass legislation mandating bilingual education and has been used as a model by many other states.

We asked the top-ranking bilingual education officials in six states to present an overview of their state's trends in language assessment. The six states are currently participating in a project we are conducting at Bloomsbury West, under the sponsorship of the Education Policy and Organizational Development Division of the National Institute of Education. The project is comparing bilingual education policy and policy implementation in these six states to federal Lau policy, and is seeking to determine which state and local factors contribute to differences between state and federal policy. This series of papers represents the perspectives from each state without attempting any comparisons.
The officials in charge of bilingual education for five of the states gave presentations at the 1980 Georgetown University Round Table on Languages and Linguistics. Of these, we have papers from Ernest Perez of Texas, Ramiro Reyes of California, Maria Medina-Seidner of Illinois, and Ernest Mazzone of Massachusetts. Crises, which comprise much of the working lives of high level state education officials, prevented Ms. Carmen Perez from completing her paper in time to meet publication deadlines.

NOTES

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1. For further information on the project, contact Dr. Heidi Dulay, Bloomsbury West, Inc., 1111 Market Street, San Francisco, California 94103, telephone (415) 863-3343.

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California Education Code. 1976. Sec. 5768.2, 5768.6, 5769, 5769.4, 5767 ff.
Massachusetts General Laws. 1972. Ch. 71A.
CURRENT TRENDS IN MASSACHUSETTS IN THE ASSESSMENT OF LANGUAGE MINORITY STUDENTS

Ernest J. Mazzone
Massachusetts Department of Education

This presentation focuses on three student assessment issues related to the implementation of the Massachusetts Transitional Bilingual Education Act. The first important matter to be dealt with is the identification, placement, and transfer of limited English proficiency (LEP) children who are enrolled in transitional bilingual education programs. A second significant concern is the question of how to measure attainment levels of limited English proficient children who are enrolled in transitional bilingual education programs. The third critical question deals with student assessment and basic skills policy.

The policy for the identification, placement, and transfer of limited English proficiency students is established in the following provisions of the legislation:

Each school committee shall ascertain, not later than the first day of March, under regulations prescribed by the department, the number of children of limited English-speaking ability within their school system, and shall classify them according to the language of which they possess a primary speaking ability.

When, at the beginning of any school year, there are within a city, town or school district not including children who are enrolled in existing private school systems, twenty or more children of limited English-speaking ability in any such language classification, the school committee shall establish, for each classification, a program in transitional bilingual education for the children therein; provided, however, that a school committee may establish a program in transitional bilingual education with respect to any classification with less than twenty children therein.
An examination in the oral comprehension, speaking, reading and writing of English, as prescribed by the department, shall be administered annually to all children of limited English-speaking ability enrolled and participating in a program in transitional bilingual education. No school committee shall transfer a child of limited English-speaking ability out of a program in transitional bilingual education prior to his third year of enrollment therein unless the parents of the child approve the transfer in writing, and unless the child has received a score on said examination which, in the determination of the department, reflects a level of English language skills appropriate to his or her grade level.

The statutory language clearly and specifically spells out the state policy in the matter. Note that it states that an annual examination in English is to be administered to determine proficiency in the four language skills. The results of the examination shall be used to ascertain the feasibility of mainstreaming or transferring children into the standard curriculum.

To ensure that local school districts meet the last provision, it has been the policy of the state Bureau of Transitional Bilingual Education to require that the local school systems submit to it for approval the examination procedures to be used, the test to be used, and the cutoff scores to be used to make the decision about transfer of students.

To identify limited English proficient children, the state policy requires local school districts to conduct a census in the district to determine the number and non-English language backgrounds of limited English proficient children. Each principal at the school house level is required to identify by assessing English language proficiency in the four language skills of reading, writing, speaking, and understanding. Those children judged to be limited English speakers are then placed in a program of transitional bilingual education wherein the first language of the child and English are used in the instructional program.

After the Supreme Court decision of 1974 in Lau v. Nichols, which dealt with equal educational opportunity for limited English proficiency students, the federal Office of Civil Rights developed and published a set of policy guidelines known as the Lau Remedies which spell out in a rather detailed way the federal requirements on the subject of identification, placement, and transfer of limited English proficiency students.

When one examines the relationship of the Lau Remedies and state mandates on the subject, it becomes clear that in several domains there is overlapping as well as questions of higher order prevalence; this means that there are provisions in the state law which exceed the requirements of the federal law, as in the matter of full-time transitional bilingual education.
instruction, or that there are provisions in the federal policy which require more of a school district than does the state law. It is a fact that on the issue of identification, placement, and transfer, the Lau Remedies exceed the state requirements in Massachusetts.

The questions of overlapping and higher order prevalence tend to promote ambivalence and ambiguity for local school district officials and administrators. Anxiety prevails about which policy to follow. To help clarify the issues for Massachusetts educators, a task force made up of local, state, and federal personnel was established to analyze the problem and offer suggestions for its resolution.

The task force looked at a number of specific policy issues in several state and federal statutes dealing with equal access and equal educational opportunity. It suggested steps for convergence on such things as the assessment of language proficiency, community involvement, use of the non-English language medium, and other related matters.

It was the intent of officials in the Massachusetts Department of Education to issue an official policy statement clarifying the issues and to disseminate it to local school district personnel. Release of the statement, however, has been delayed because of recent developments surrounding the status of the federal Lau Remedies. The latter are under revision and it is anticipated that a new set of rules will be forthcoming in the near future. To prevent the likelihood of additional confusion should the current Lau Remedies be significantly altered, local school personnel are being advised to consult with state and federal authorities when in doubt about the prevailing policy. School districts have been advised that the principle of the higher order of prevalence must be followed.

The second issue regarding assessment on which this paper focuses is the statewide assessment project instituted by the Massachusetts Board of Education in 1973. It was intended to provide Massachusetts citizens with useful information about the quality of education in the state. During 1974-1975, the first phase of the statewide educational assessment program was conducted. A random sample of 18,000 9- and 17-year-old students in 338 schools in Massachusetts participated. The areas assessed were: reading, mathematics, and decision making for both ages, and occupational knowledge and occupational attitudes for 17-year-olds only. In addition, a sample of citizens in the state was surveyed to determine their attitudes toward education and their evaluation of Massachusetts' educational goals. Children classified as enrolled in transitional bilingual education were not included in the assessment. This assumes, of course, that no limited English-speaking children were part of the sample since limited English speakers are presumed to be enrolled in transitional bilingual education programs.

After the results of the first phase of the program were published in the spring of 1975, the Statewide Assessment Advisory
Committee was asked to recommend the areas to be examined in Phase II of the assessment program. It recommended that the assessment focus on writing, citizenship, and social studies. A separate study was also made of foreign language performance among secondary school students with different lengths and intensities of exposure to instruction in French or Spanish. At one point, a decision was made to assess children enrolled in transitional bilingual education in reading and mathematics for 9- and 17-year-old students, similar to the assessment conducted in the previous year for nontransitional bilingual education enrolled students.

The second important decision that had to be dealt with for assessing reading and mathematics skills of limited English proficiency students was that of assessment instruments. An administrative decision was made to examine the feasibility of translating the existing English version tests used the year before. An accompanying decision was made to do this in the two languages representing the largest number of children in the transitional bilingual education program. They were Spanish and Portuguese.

When asked about how the Bureau of Transitional Bilingual Education could participate in the matter, the state director recommended that a translation of an English version not be the approach to assessment instrument development. His advice, based on consultation with professional testing experts in the field of student assessment of limited English speakers, was to develop tests from scratch. To do this, however, would create problems of comparability of data between limited English proficient students and native speakers of English, since the tests would be different in essence. To use translated versions of the same items in the test was equally invalid. Early on, it became obvious that results of tests for a single population of Spanish or Portuguese 9- and 17-year-olds could not be used for comparison purposes.

As with all significant policy issues, the Massachusetts Advisory Council on Bilingual Education, which advises the Massachusetts Board of Education on bilingual-bicultural education issues, took a position on the matter. After intensive scrutiny of the issues, it advised the state Board not to translate the existing tests and not to develop tests which would be used for purposes of comparison. The Council volunteered to work with the state assessment office in conceptualizing an appropriate testing program and designing appropriate procedures and tests. The state Board accepted the advice.

An Assessment Committee, appointed by the state bilingual advisory council, over a period of two years developed, in cooperation with the state Bureau of Research and Assessment, the Massachusetts Bilingual Proficiency Series Test. The following instruments are included in this series: Language Arts and Reading in Spanish for age level nine (9); Language Arts and Reading in Portuguese for age level nine (9);
Language Arts and Reading in Portuguese for age level thirteen (13); mathematics for age level nine (9) in English.

The instruments are intended to be of use to bilingual teachers and administrators in assessing the proficiencies of their students in the content areas measured by the series. Although the instruments were pilot-tested and raw data was gathered for the pilot test reports, the examiner's manual accompanying the series advises the reader that since the sampling procedures are not as rigorous as in the typical Massachusetts Educational Assessment Program, extreme caution should be used in making comparisons when using the raw data. In essence, then, the series is meant to serve as a teacher tool to diagnose student proficiency in selected subject areas.

The activity and events surrounding the statewide assessment program were in a real sense a prelude to the third assessment issue to be discussed here.

In November, 1975, the state Board of Education began a major policy review of the need for minimum standards for high school graduation in Massachusetts. This activity ran alongside the previously discussed statewide assessment program. The results of the previous assessment were enough cause to prompt a policy on basic skills improvement which would require local school districts to establish minimum standards for the basic skills areas of mathematics, reading, and writing by no later than September, 1980, and minimum standards for the basic skills areas of listening and speaking by no later than September, 1981.

Essentially, the policy requires local school districts to take the initiative in establishing the standards and to decide at which grade level evaluations of student performance will take place and which evaluation instruments are to be used.

What impact does this policy have on limited English proficiency students? The state Board of Education, always sensitive to the needs of limited English proficiency children, once again sought the advice of the Massachusetts Advisory Council of Bilingual Education in the development of its minimum standards policy. After a considerable amount of discussion over a period of several months, the Bilingual Advisory Council took the posture that students identified, screened, and enrolled in programs governed by Massachusetts General Laws, Chapter 71A, the Transitional Bilingual Education Act, shall not be subject to the provisions of the minimum standards policy. Students who have completed transitional bilingual education programs and have been mainstreamed are to be considered as any other students and consequently subject to the policy. The state Board adopted this position and made it part of its policy on basic skills improvement.

You should note that this policy is consistent with that taken in the statewide assessment project previously described and in the follow-up assessment of basic skills conducted in 1978-1979.
That means that the state Board has continuously recognized the linguistic and cultural differences of the limited English proficiency population in the schools whenever it establishes policy that impacts on them and in this case particularly, in the area of student assessment.

Although students who are enrolled in transitional bilingual education programs have not been assessed, there are language minority students who either were previously enrolled or never enrolled in such programs who have been assessed. In the 1978-1979 basic skills assessment, it was found that Spanish and Portuguese minority students on the average scored 9 to 14 percentage points below English proficiency students, where among the former, it was indicated that a language other than English was spoken in the home more than half the time.

Although the report of the statewide assessment of basic skills in 1978-1979 cautions the reader to refrain from drawing cause-effect inferences from the data, it does note that there is cause for concern in basic skills achievement with certain segments of the school population. It points out that in balancing the positive and negative findings of the first statewide assessment of basic skills, the schools are doing a good job in teaching the basic skills, but that the schools must do better with those minority and other groups whose achievement is significantly below the statewide average. Additionally, it advises schools to examine carefully their current instructional programs in writing to see where improvement can be made, with particular attention to the frequency of writing assignments.

What are the implications for educational policy for limited English speakers? State Board members often ask whether or not children are learning the basic English skills. Furthermore, they want to know how long it takes to teach English skills to limited English speakers. There is a real concern that it might be taking too long. There has been a fear that a large number of limited English proficiency students are being held four, five, or more years in a transitional bilingual education program. The Massachusetts policy requires local school districts to enroll children in transitional bilingual education for three years. It is generally assumed that three years is enough for purposes of transition.

To dispel some of the myth surrounding how long children are being held in a transitional bilingual education program, a study was conducted on the number of years a child is enrolled in a transitional bilingual education program before being mainstreamed. The results showed that 2 percent of the enrolled children have been in transitional bilingual education programs for one year, 16 percent for two years, 74 percent for three years, and 8 percent for more than three years. These statistics seem to dispel the fear that too many children are being kept in transitional bilingual education programs for more than three years.
When this information is compared with the data from the 1978-1979 basic skills assessment of Spanish and Portuguese students referred to earlier, one might come away with some anxiety about the implications. Could it be, since some of the Spanish and Portuguese students who were tested in 1978-1979 either were never enrolled in transitional bilingual education or were enrolled but mainstreamed too soon? The question has to be worth considering in view of current evidence which suggests that to make a difference, children should be enrolled for at least five years, especially at the early grades.

When all is said and done, it really is incumbent on those who know the value of bilingual schooling to continue to communicate with school boards, superintendents, parents, the media, and the press, and to impress on them that poor testing results are signs of a malaise, a malaise which neglects to recognize fully that the total development of the limited English proficiency child is deficient in many of our schools, and that indeed the results seem to support even more forcefully the need to instruct children according to their own needs, using their assets in language and culture instead of their deficiencies.

This in no way minimizes the need to strengthen the assessment of student performance. Student performance must be assessed in terms of student assets and with the appropriate mechanisms. To do this effectively, what is needed is quality support in the instructional systems. There is need for: (1) parental involvement, (2) close monitoring of teacher licensing procedures, (3) better training of teachers, (4) better public support and understanding, and (5) program evaluation with more precision of goals and objectives to determine which models are the most effective. It is clear that these components of a program themselves have to be evaluated for effectiveness. But in the final analysis, there is need for quality student performance data to determine what works best and what characteristics of a program are the most crucial and essential in making it work best.

To this end, the Commonwealth of Massachusetts has developed over the last two years with involvement of evaluators, program directors, and others, an evaluation design to be pilot-tested this year and implemented in school year 1980-1981 in all federal Title VII basic programs in the state. It is anticipated that the evaluation design will be institutionalized by school year 1982-1983 to include all bilingual programs in the state. This will provide a common data base for program and student performance.

In conclusion, it should be noted that the Massachusetts State Board policy on assessment of limited English proficiency students has been developed with care, and with the close cooperation and involvement of the constituencies affected. In the author's view, the Massachusetts policy is sane, rational, and fair.
NOTES

1. Massachusetts General Laws, Chapter 71A, the Transitional Bilingual Education Act, Section 2. 1971.
CURRENT TRENDS IN THE ASSESSMENT OF LANGUAGE MINORITY STUDENTS IN TEXAS

Ernest Perez
Texas Education Agency

Introduction. In this paper I discuss activities that are currently in operation in the State of Texas and others scheduled for implementation in the near future. They include: (1) program accountability, (2) minimum competency testing, and (3) assessment of teachers' language proficiency. In addition, I comment on assessment activities in other states as they relate to those in Texas.

The 'Goals for Public School Education in Texas', adopted by the State Board of Education, cite 'student development' as one of three major goals:

The public schools should help each student to develop personal knowledge, skills, and competence to maximum capacity, and to learn behavior patterns which will make each a responsible member of society.

This objective is consistent with public policy of the State of Texas as delineated by legislative action in Section 16.001 of the Texas Education Code:

It is the policy of the State of Texas that the provision of public education is a state responsibility and that a thorough and efficient system be provided and substantially financed through state revenue sources so that each child shall have the opportunity to develop his/her full potential.

It is a state-level responsibility to assure that children are provided programs that meet their needs. Specifically, it is
the responsibility of the state to provide direction and to facilitate the capabilities of school districts in order for them to identify and provide for the needs of their various student populations. Since the district is the direct provider of services to children, it is the district's responsibility to develop and implement appropriate programs.

One student population that has been identified at both state and national policy levels as needing special instructional programs is the group composed of children of limited English proficiency (LEP). Title VI of the Civil Rights Act affirms as national policy that such children will be assured 'equal educational opportunity'. This mandate is consistent with Texas policy.

As an expression of this policy, the state Legislature enacted Sections 21.451-21.460 of the Texas Education Code, which prescribes instructional programming and allots special funds to assist districts with high concentrations of limited English proficient children in establishing bilingual education programs in grades K-3, with district options for grades 4-5. Texas law requires each school district which has an enrollment of 20 or more children of limited English proficiency, in any language classification, in the same grade level, to implement a program of bilingual instruction. Since the enactment of the law, there has been a slow but gradual increase in the number of programs serving LEP children. This school year, approximately 150,000 pupils in grades K-8 are being served by 246 federal or state mandated bilingual education programs.

In order to implement state policy and to provide school districts with uniform guidelines for the design and implementation of programs for LEP children, the Texas State Plan for Bilingual Education was developed. This plan is applicable to all school districts and represents the state-approved approach, consistent with state law, for meeting the needs of limited English proficient children enrolled in Texas public schools. It delineates criteria, procedures, responsibilities, and time frames for full program implementation.

More recently, the state agency has assumed leadership in several new areas which I would like to discuss in greater detail. During the last few years there has been a growing expression of public concern regarding the quality of education in general. This concern has resulted in two major trends which imply an increased emphasis on assessment in coming years. On the one hand, we see a mounting demand for program accountability to justify the funding of special educational programs; on the other, the 'return to basics' movement has led to the implementation of minimum competency testing in nearly every state in the Union. These two major trends have generated new roles of leadership and responsibility for all state education agencies.
Program accountability. In terms of educational accountability, I believe bilingual education is at the crossroads; and we either have to 'put up (show results) or shut up'.

Although ten years have undoubtedly produced some progress in bilingual education, the development of the field generally has not been cumulative, and the state of the art remains distressingly primitive. In a word, the validity of bilingual education—its assumptions, its procedures, its results—is being challenged, and this validity must be established within the local state context.

As an analogy, we can look to the job sector where the validity of selection procedures, test scores, and administrative hiring decisions has been challenged in the courts, and employers have had to produce evidence to justify their procedures and hiring practices. In a recent court case in Kentucky, the United States District Court ruled that the police officer examination was content-valid but that Title VII of the Civil Rights Act forbids police departments to choose candidates on the basis of their rank score on the examination. Reason? The court concluded that no criterion-related validity existed to indicate that the highest scores will necessarily make the best qualified policemen. Similarly, we need well-designed, well-controlled, comprehensive program evaluations to establish the content and criterion-related validity of bilingual education.

Proof of the effectiveness of bilingual programs is necessary, not only to assure continued funding of current programs, but also to accomplish the institutionalization of bilingual education as an integral component of public school education in the United States. What we have seen in the past decade has been pseudoinstitutionalization of bilingual education programs. That is, we have seen apparent institutionalization through legislative mandates and court rulings. What we must strive for is the incorporation of bilingual education as a traditional element in the educational system from the elementary school classroom through our institutions of higher education. To accomplish this objective, we must not only show that bilingual programs work, but we must also show which programs work best for what types of students in what kinds of settings. As a first step in this effort, Texas must establish a statewide data base concerning all aspects of bilingual programs. Such a data base could provide valuable information to projects throughout the state, as well as facilitate feedback that could serve to modify and enhance program effectiveness. The Texas Education Agency (TEA) has taken steps to initiate such a data base. The numbers of students to be served has been established by region, as have the number and qualifications of bilingual teachers who are participating in educational programs in each of these areas (see Tables 1 and 2). However, this is just a beginning. Additional information must be gathered pertaining to all four elements which influence program effectiveness—students, teachers, settings, and the programs.
Table 1. Number of bilingual programs in the state of Texas, March, 1980.

<table>
<thead>
<tr>
<th>Geographic area</th>
<th>Education service center regions</th>
<th>Number of bilingual education programs</th>
</tr>
</thead>
<tbody>
<tr>
<td>South Texas</td>
<td>1, 2, 20</td>
<td>90</td>
</tr>
<tr>
<td>Coastal Bend</td>
<td>3, 4, 5</td>
<td>30</td>
</tr>
<tr>
<td>East Texas</td>
<td>6, 7, 8, 10, 11</td>
<td>32</td>
</tr>
<tr>
<td>Central Texas</td>
<td>12, 13, 15</td>
<td>30</td>
</tr>
<tr>
<td>West Plains</td>
<td>9, 14, 16, 17</td>
<td>41</td>
</tr>
<tr>
<td>Trans Pecos</td>
<td>18, 19</td>
<td>23</td>
</tr>
</tbody>
</table>

The Texas Evaluation Plan. Texas developed a Bilingual Education Evaluation and Reporting System (BEERS), designed to capture the kinds of data that would constitute a statewide data base. Utilizing the knowledge gained from Title I program evaluation methods and models, we have developed an evaluation model that incorporates the most current knowledge in educational evaluation. Although we were unsuccessful in establishing BEERS as a mandatory evaluation system throughout the state during 1979, we anticipate that perhaps 50 state and Title VII bilingual projects will be using the BEERS during 1980. A ready-made network exists in Texas to carry out the preliminary testing of this system. This network consists of the Evaluation, Dissemination, and Assessment Center for Bilingual Education and several Bilingual Education Service Centers which, together, can facilitate training of district personnel in assessment and evaluation methodology. At the state level, there are state-supported technical specialists to develop and implement pilot testing of the Bilingual Education Evaluation and Reporting System. We see statewide evaluation systems such as BEERS as representative of the trend toward greater state agency involvement in coordinating activities and fulfilling its leadership role in bilingual education. The variety and complexity of program data demands a centralized information source which, logically, should be the state education agency.

Program evaluation is, essentially, a strategy for monitoring any type of program that involves delivery of services. It is a strategy that not only results in articulation of program elements, but also enables users to identify particularly effective combinations of methods, materials, and subjects.

Instructional approaches are differentially effective for different types of students. In order to ascertain what types of programs work best for what students in what specific settings, an evaluation system must include information related to the characteristics of students, teachers, administrators, school, and community settings, and of the instructional programs themselves. BEERS was designed to include this full range of
Table 2. Bilingual teacher and bilingual student population in the state of Texas, March, 1980.

<table>
<thead>
<tr>
<th>Region</th>
<th>Certified</th>
<th>Permit</th>
<th>Total</th>
<th>Number of LEP students</th>
<th>Certified: Student ratio</th>
<th>Certified and permit: Student ratio</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>2,053</td>
<td>398</td>
<td>2,451</td>
<td>48,584</td>
<td>1:23.66</td>
<td>1:19.82</td>
</tr>
<tr>
<td>II</td>
<td>506</td>
<td>58</td>
<td>564</td>
<td>7,036</td>
<td>1:13.91</td>
<td>1:12.48</td>
</tr>
<tr>
<td>III</td>
<td>27</td>
<td>10</td>
<td>37</td>
<td>305</td>
<td>1:11.30</td>
<td>1:8.24</td>
</tr>
<tr>
<td>IV</td>
<td>340</td>
<td>60</td>
<td>400</td>
<td>11,543</td>
<td>1:33.95</td>
<td>1:28.86</td>
</tr>
<tr>
<td>V</td>
<td>12</td>
<td>2</td>
<td>14</td>
<td>197</td>
<td>1:16.42</td>
<td>1:14.07</td>
</tr>
<tr>
<td>VI</td>
<td>4</td>
<td>2</td>
<td>6</td>
<td>104</td>
<td>1:26.00</td>
<td>1:17.33</td>
</tr>
<tr>
<td>VII</td>
<td>4</td>
<td>3</td>
<td>7</td>
<td>439</td>
<td>1:109.75</td>
<td>1:62.71</td>
</tr>
<tr>
<td>VIII</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>IX</td>
<td>5</td>
<td>4</td>
<td>9</td>
<td>97</td>
<td>1:19.80</td>
<td>1:10.78</td>
</tr>
<tr>
<td>X</td>
<td>254</td>
<td>44</td>
<td>298</td>
<td>6,378</td>
<td>1:25.11</td>
<td>1:21.40</td>
</tr>
<tr>
<td>XI</td>
<td>74</td>
<td>0</td>
<td>74</td>
<td>1,044</td>
<td>1:14.11</td>
<td>1:14.11</td>
</tr>
<tr>
<td>XII</td>
<td>21</td>
<td>5</td>
<td>26</td>
<td>367</td>
<td>1:17.48</td>
<td>1:14.12</td>
</tr>
<tr>
<td>XIV</td>
<td>36</td>
<td>2</td>
<td>38</td>
<td>377</td>
<td>1:10.75</td>
<td>1:9.92</td>
</tr>
<tr>
<td>XV</td>
<td>128</td>
<td>7</td>
<td>135</td>
<td>2,060</td>
<td>1:16.09</td>
<td>1:15.26</td>
</tr>
<tr>
<td>XVI</td>
<td>52</td>
<td>21</td>
<td>73</td>
<td>1,193</td>
<td>1:22.94</td>
<td>1:16.34</td>
</tr>
<tr>
<td>XVII</td>
<td>268</td>
<td>74</td>
<td>342</td>
<td>3,375</td>
<td>1:12.59</td>
<td>1:9.87</td>
</tr>
<tr>
<td>XVIII</td>
<td>118</td>
<td>24</td>
<td>142</td>
<td>2,890</td>
<td>1:24.49</td>
<td>1:20.35</td>
</tr>
<tr>
<td>XIX</td>
<td>613</td>
<td>52</td>
<td>665</td>
<td>16,596</td>
<td>1:27.07</td>
<td>1:24.95</td>
</tr>
<tr>
<td>XX</td>
<td>1,397</td>
<td>100</td>
<td>1,497</td>
<td>19,002</td>
<td>1:13.60</td>
<td>1:12.69</td>
</tr>
<tr>
<td>Totals</td>
<td>6,106</td>
<td>881</td>
<td>6,987</td>
<td>125,819</td>
<td>1:20.61</td>
<td>1:18.01</td>
</tr>
</tbody>
</table>
variables. For example, BEERS instruments are designed to provide information on English proficiency test scores of pupils—including which proficiency test was used, the type of bilingual program, the number of years students have been in a bilingual program, a socioeconomic status indicator, attendance data, teacher judgments of student progress, and achievement test scores. Spanish language as well as English achievement test scores are being utilized. The task we have planned allows us to examine the relationship between teachers' judgments and scores on both nationally normed standardized achievement tests and criterion referenced tests in districts in which criterion reference tests are preferred. Through the use of regression analysis, we further intend to specify to what extent pre- and posttest scores are affected by various other demographic and methodological factors. In addition, we intend to explore the correspondence between language proficiency scores, achievement tests scores, and teachers' ratings of a student's ability to achieve in an all-English classroom.

The concurrent validity of both language proficiency test classifications and the currently accepted exit criterion (a language skills score at the 40th percentile on a nationally normed, standardized achievement test) has yet to be substantiated by empirical data. One recent study conducted in Houston investigated the correlation of five language proficiency tests with each other and with a number of standardized achievement tests. This study found low correlations between the language proficiency measures included in the study and low—in some cases negative—correlations between three of the language proficiency tests and achievement test scores (Gillmore and Dickerson 1979). The investigators attribute these disappointing results to the low reliability of language proficiency instruments. There is, therefore, a critical need for improving the reliability and validity of language proficiency tests, as these instruments are, at present, the most influential factor in determining what educational experiences a bilingual student receives.

The tests that have currently been approved by the Agency for use in state-funded bilingual programs are the Bilingual Syntax Measure (BSM I and II), Primary Acquisition of Language (PAL), Basic Inventory of Natural Language (BINL), Ilyin Oral Interview, Language Assessment Scales (LAS), Comprehensive English Language Test (CELT), Language Assessment Battery (LAB), and Shutt Primary Language Indicator Test (SPLIT). An article by Dieterich, Freeman, and Crandall in the Teaching English to Speakers of Other Languages (TESOL) Quarterly, December, 1979, points out the current conceptual and linguistic problems involved in English proficiency tests. These authors, whose work was supported by the Ford Foundation through a grant to the Center for Applied Linguistics, surveyed 39 tests of English language proficiency and found that they varied in scope, content, tasks, scoring procedure, and interpretation. This study lends support to
the findings of low reliabilities of language proficiency tests observed in the Houston study. It is expected that, as a result of the Houston study and information from other expert sources, the statewide test evaluation committee will propose several actions: (a) use of two or more language proficiency measures in classifying students; (b) asking school districts to determine the relationship between the language proficiency test used and achievement test scores; (c) use of other data, e.g. classroom performance, teacher ratings, etc., to supplement language proficiency classifications; (d) reevaluation and possible reinterpretation by the test evaluation committee of the different levels of language proficiency tests.

Very little is known at this time about appropriate instructional strategies for children at different levels of Spanish and English language proficiency. Furthermore, little, if any, research has been conducted to determine the correspondence between standardized achievement tests and bilingual program curriculum at various grade levels. The BEERS plan includes the assessment of achievement in both English and Spanish language skills. Data resulting from both assessments will permit analysis of the achievement of students in programs that emphasize development of native language skills while introducing second language skills as compared to student achievement in programs that primarily emphasize development of second language skills.

In relation to the problem of the appropriateness of standardized achievement tests, Texas has been instrumental in establishing state norms for the Inter-American Tests published by Guidance Testing Associates, Inc. Using the State Education Agency's good auspices with bilingual projects throughout the state, fall norms for the Prueba de Lectura were developed from a sample of 10,000 pupils at reading levels 1-5 from 17 urban and rural school districts in South Texas. Spring norms were developed from a sample of 24,000 pupils from 18 urban and rural school districts in South Texas. The development of LEP test norms, including percentile ranks, makes it possible to compare any one student's score to the performance of limited English proficient students, in the same grade, throughout the state of Texas. The need for special group norms for LEP students is justifiable on the same basis that separate male and female norms were established for the verbal and quantitative sections of the GRE (Keller 1980). It is hoped that all major test publishers will direct their attention to the establishment of limited English proficiency norms in the near future. Such norms would also assure a more accurate assessment of how students achieve in bilingual education programs.

The Texas Education Agency has established standing test committees in four areas. Besides the Committee on English Language Proficiency Tests, which is charged with providing a list of tests acceptable for use in classifying LEP children and developing procedures for using these tests, a newly appointed
committee is studying English language achievement tests. This committee is examining all nationally standardized English achievement tests for their appropriateness in assessing the achievement of LEP students.

Obviously, there is a great need for competent assessment and evaluation personnel in bilingual education departments. My impression of the status of evaluation in bilingual education departments in state education agencies as a whole is that few departments have utilized, or have available to them, real evaluation expertise. In Texas, we will be using an increasing percentage of 'capacity building' monies to support the development of evaluation capability. There is a considerable interest, despite the failure to mandate statewide implementation of BEERS, in evaluation methodology that will 'tell the Texas story, regardless of what other states and the nation may or may not do'.

A study of a sample of Texas Title VII projects was conducted two years ago. This study revealed a serious commitment to evaluation, because practitioners believe that their bilingual programs are effective, and project personnel are eager to see this effectiveness demonstrated. The only thing that the study participants asked was that technical assistance be made available to them to guide and direct their evaluation efforts. I am happy to report that the Texas Education Agency has assumed leadership in seeing that studies are performed to demonstrate and support bilingual education and that efforts are underway to validate assessment instruments and the requirements for selecting students into and exiting them from bilingual education.

Minimum competency testing. The second major trend which involves statewide testing is the implementation of minimum competency testing, undoubtedly inspired by the 'back to basics' movement which has gained public support over the past few years.

Texas has mandated basic skills competency testing in reading, writing, and mathematics, although, as yet, no state standards for pupil graduation have been set. During the 1979-1980 school year, the state required testing at grades 5 and 9 under its Texas Assessment of Basic Skills (TABS) Project. The Texas Assessment of Basic Skills, including subtests of reading, writing, and math is being used, along with other specially prepared instruments. This new program will provide important information to the Bilingual Department. Information will be made available to us on all the limited English proficiency pupils who are being served and those not being served by bilingual education programs. While bilingual educators are essentially in agreement with the need to assess basic skills, competency tests also present validity problems as far as the assessment of LEP students is concerned.
In the first place, it is unlikely that second language skills are acquired at the same rate, or in the same sequence, as native language skills. For this reason, it would not be likely that the English language curriculum of, for example, fifth grade bilingual program students would be identical in scope, sequence, and skills objectives to the curriculum presented in monolingual fifth grade classrooms. Competency tests, of course, are based on curriculum objectives commonly established for English-speaking students in monolingual classrooms. It would be highly unfortunate if poor performance of LEP students on a statewide competency test were attributed to some deficiency inherent in bilingual programs when, in fact, there has been no attempt to relate the content of the competency tests to bilingual program curriculum.

The situation is further complicated by the fact that LEP students made the transition to monolingual classrooms at different stages in the process of language skills development. For example, one student may have exited a bilingual program at the beginning of the third grade, while another student may have made the transition at the beginning of the fifth grade. These two students would differ greatly as to their experience with traditional monolingual classroom curriculum. Bilingual educators believe that a special effort should be made to include a representative sample of LEP students and non-LEP students in the pilot testing of any instruments being considered by states for a minimum competency testing program.

Assessment of teachers' language proficiency. The TEA has developed an innovative system for determining the language proficiency of potential bilingual program teachers and is currently cooperating with other states in establishing similar types of programs. Although we recognize the importance of accurate strategies for determining who will be served by our bilingual education programs, we also feel that the quality of the educational experiences these children will receive depends upon the competencies and capabilities of their teachers.

In our search for an oral language proficiency examination, we found no test or system that met our requirements for validity, reliability, and legality. The approach which most nearly met these requirements was the language proficiency interview technique developed for the Foreign Service Institute and adapted for the Peace Corps. In our discussions with Educational Testing Service (ETS), we learned that these procedures were being used to test the language proficiency of bilingual teachers in some states. Because we were concerned that certain legal questions could be raised about the details of the procedures, the TEA, in coordination with ETS, undertook the design of an acceptable oral language proficiency examination which meets the requirements for validity, reliability, and legal safeguards.
To ensure that the examination actually tests the language forms that are needed in the bilingual classroom and by the bilingual teacher, the interview is based on the curriculum and instruction in the bilingual program, on the general problems of teaching, on the rationale and purpose of bilingual education in terms which are understood by parents, and on the experiences of children of limited English proficiency. Thus, the language forms needed for instruction, for discussing the progress of children with parents, and for conversing with the children about things outside the classroom are sampled in the interview. Where this requires the use of local dialect and/or terms, the ability of the candidate to understand and use these terms therefore becomes a part of the oral interview.

Two questions of reliability were raised. First, how can it be assured that a rater is consistent in the evaluation of a candidate's language proficiency? To ensure reliability, each rater rates test tapes of interviews conducted according to standard practice. Since these tapes will always be the same, the rater should consistently rate the tapes at the same level. Raters showing inconsistencies will receive additional training until standards are met, or they are deleted from the list of approved raters.

Second, how can interrater reliability be assured? Interrater reliability is assured by requiring that more than one rater rate each tape. When the ratings assigned by different raters differ by more than one-half a level, the raters are retrained or are deleted from the list. Both rater reliability and interrater reliability monitoring are part of the teacher testing program.

To protect all parties and to ensure that adequate legal safeguards were built into the procedures, the following issues were addressed in the testing programs: job-relatedness, objectivity, different language dialects, validity, and reliability. Job-relatedness is provided in the interview by including tapes that are directly related to the job of the bilingual teacher. The sample of language is the type of language needed in the classroom.

Objectivity is attained in the entire program and in the functions assigned to each person involved in the system. The interviewers do not judge the proficiency of the candidate; rather, their function is to conduct the interview on topics which are familiar to the candidate and to ensure that the most needed areas of language are covered.

Both the interviewers and the raters are familiar with the dialects of the language spoken in Texas. Both groups are aware that local dialects are acceptable and that teachers must teach language arts and content in the language. On this basis, differences in dialects can be accommodated by both interviewer and rater. Familiarity with local dialect is considered a positive indicator of proficiency in the rating process.
Formal Spanish is required only to the extent that it is necessary to instruction in required content in the classroom.

Control for validity and reliability has already been described and, in addition, a validity study is being conducted as part of the language testing process. In this study, candidates from state approved undergraduate bilingual teacher training programs are interviewed and rated. From this control group, the standards set by the TEA can be verified and modified. Because the control group is not required to pass this examination (they are in a different kind of program), the standards upheld in the basic program can be determined without threat to the prospective teachers. The study, therefore, compares teachers from the regular programs with teachers who are being tested as part of the endorsement program.

A number of other safeguards are built into the system. The most important is the due process which has been established. In all cases where doubt may exist about the attainment of the required standard of proficiency, the interview is re-rated by other raters. Should a situation arise in which consensus is impossible, more experienced raters from out of the state are used to make the final determination of the proficiency level. If the candidate is not satisfied with the rating, he/she may request a new interview or a reevaluation of the interview already taped. In such cases, we suggest that the candidate be reinterviewed. Tapes which have been rated are kept on file for a stipulated period of time to provide for a possible challenge by candidates.

The entire program acts as a check on itself. Raters are checked regularly by Educational Testing Service, which actually receives the tapes, assigns them to raters, and makes all necessary reports. The interviewers are constantly monitored by the raters who, in turn, report any irregularities in the interviews they are rating. Throughout the process, the identity of the personnel involved is guarded so that no one involved in actual substantive tasks knows who the other individuals in the process are.

Assessment activities in other states. I would like to close by comparing assessment activities as they are evolving in Texas with what other states are doing. We conducted a computer search of the data bases of the National Clearinghouse for Bilingual Education, which revealed that efforts in other states are similar to the trends seen in Texas.

In California, Assembly Bill 65 attempts to equalize California School Finance and improve school programs. Colorado has implemented a statewide evaluation system and is currently attempting to identify significant program variables.

A new publication, The Language Census Survey, indicates that Connecticut, Illinois, and Massachusetts have developed the most detailed transition criteria. The New Jersey approach puts the transitional assessment in terms of the Minimum Basic
Skills assessments as they are applied to students in general educational programs. Since competence assessments are made at grades 3, 6, 9, and 11, interim assessments of pupils in bilingual programs are made at grades 1, 2, 4, 5, 7, 8, and 10. These assessments utilize native language communication skills measures. Students take the uniform statewide Minimum Basic Skills assessment in their native language at the regular checkpoint grades: 3, 6, 9, and 11. Students may be considered for mainstreaming only at the interim years preceding Minimum Basic Skills checkpoint assessment, that is, at grades 2, 5, 8, and 10.

Also, school districts are required to collect a broad range of predictive data before a student is considered a candidate for mainstreaming. These data include, but are not limited to, teachers' evaluations of a student's English oral language proficiency, his/her reading and writing ability, and his/her Minimum Basic Skills attainment. The New Jersey approach links Minimum Basic Skills assessment to bilingual program entry and exit criteria.

A report entitled *State of New Jersey: The Bilingual Minimum Standards Committee Research Report and Policy Recommendation* (1978) provides detailed classification schemes for students and programs, as well as explicit program entry and exit criteria. The report includes the results of a national survey of transition criteria. Thirty states responded to this survey. Of the 30 states that responded, 20 had no state education agency prescribed transition criteria at all. Five states had state-designated entry criteria, and only 4 states had state-prescribed entry and exit criteria.

The Michigan Public Act 294 requires local schools with 20 or more LEP students to establish and maintain bilingual instruction programs. The Act also requires the State Board of Education to approve a testing system suitable for evaluating the English language skills proficiency of LEP students.

Even this cursory review confirms that the issues of appropriate assessment instruments, program entry and exit criteria, and program accountability are focal issues in other states as well as in Texas. In all states we can observe movement toward greater uniformity and quality control of educational programs through state agency activity. The increasing concern for accountability is readily apparent. This concern demands that we not only develop more reliable assessment instruments, but also that we concentrate immediate efforts on the establishment of detailed bilingual program data bases. These data bases must be able to provide readily accessible information as to the number and types of students served, student achievement, numbers, distribution qualifications, and experience of bilingual teachers within the state, and specific details as to the method and extent of program implementation for each state approved project.
Finally, it would be safe to say that assessment will be an even more common educational activity in the coming decade than it has been in the past, especially at the lower grade levels. Based on this trend, teachers at all grade levels would be well advised to give special attention to the development of good test-taking skills in their students. If students are to be classified 'competent' or 'not competent', or selected into or exited from special educational programs on the basis of certain test scores, it is mandatory that these scores reflect the student's real language or mathematics abilities and not his/her test-taking competency or incompetency. Teachers must familiarize students with different item formats and different styles of instructions. They must teach students efficient response strategies. They must address the common problem of test anxiety and provide numerous opportunities for their students to develop confidence in their own test-taking abilities.

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IDENTIFICATION AND ASSESSMENT
OF LES/NES STUDENTS IN CALIFORNIA

Ramiro Reyes
California Department of Education

A brief description of California's student population. The state of California consists of 58 counties, within which are located 1,044 school districts. There are nearly 4.3 million students enrolled in the 1,044 school districts and, according to the Department of Education Fall 1977 Survey of Racial and Ethnic Distribution of Students and Staff in California Public Schools, 36.5 percent of the nearly 4.3 million students surveyed were members of identified racial and ethnic minority groups, compared with 25 percent ten years before. Hispanic students comprised nearly 21 percent in 1977.

From 1967 to 1977 there was a 3.4 percent decrease in total enrollment. However, minority enrollments showed increases ranging from 15.6 percent for blacks to 194.0 percent for American Indians. The largest increase was in the number of Hispanic students, from 616,226 in 1967 to 892,113 in 1977, a rise of nearly 45 percent. California's 1979 Language Census (R-30S) of Limited and Non-English Speaking Students (LES/NES) shows that of the total 288,427 LES/NES students in K-12, 235,073 or 81.5 percent were classified as having Spanish as their primary language. This represents an increase from the Fall 1977 Language Census of 39,400 or 20 percent in Spanish-speaking LES/NES, compared with an overall increase of 54,983 or 23.5 percent for all languages. (See Table 1.)

A brief historical perspective of bilingual education in California. Unlike other states, California state statutes mandate bilingual education for LES/NES students. The first bilingual education act in California (1972) did not make it mandatory
Table 1. Racial and minority breakdown from 1977 R-30D.

<table>
<thead>
<tr>
<th>Group</th>
<th>Total</th>
<th>% of Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hispanic</td>
<td>892,113</td>
<td>20.8</td>
</tr>
<tr>
<td>Black</td>
<td>430,367</td>
<td>10.0</td>
</tr>
<tr>
<td>Asian</td>
<td>149,132</td>
<td>3.5</td>
</tr>
<tr>
<td>Filipino</td>
<td>51,899</td>
<td>1.2</td>
</tr>
<tr>
<td>American Indian</td>
<td>38,799</td>
<td>0.9</td>
</tr>
<tr>
<td>Total minorities</td>
<td>1,562,310</td>
<td>36.5</td>
</tr>
</tbody>
</table>

for all districts to provide bilingual education opportunities for all identified LES/NES students. In fact, the 1972 act did not require a census or assessment on a uniform basis. It was not until the passage of the Chacon-Moscone Bilingual Education Act (AB 1329) in 1976 that these requirements were made mandatory for all districts. Obviously, it was recognized by the legislature that there were great numbers of K-12 students who needed other viable instructional strategies, such as bilingual education, in order to enable them to compete with their monolingual English-speaking counterparts.

The procedures and instruments used for the identification and assessment of LES/NES students. The Chacon-Moscone Bilingual Education Act was enacted by the California Legislature to ensure that public schools provide a linguistically comprehensible education for LES/NES K-12 students. Pursuant to the identification of LES/NES students, Section 5767.3 of the State Education Code specified that:

A. Each school district shall ascertain, in the month of October of each year, under regulations prescribed by the State Board of Education, the number of limited-English-speaking pupils within the district, and shall classify them according to their primary language, age, and grade level. The census shall be taken by individual, actual count and not be estimates on samplings. The results of this census shall be reported to the Department of Education by the first day of December of each year.

B. The superintendent shall prescribe uniform census taking methods, applicable to all school districts in the state. Such census taking methods shall require an assessment, on a language dominance survey instrument designated by the superintendent of all pupils whose primary language is other than English.

In order to assist educational agencies in meeting the requirements of these legislative provisions, the superintendent prescribed a two-step process utilizing a home language survey and an observation assessment instrument developed by the San Diego Unified School District. In addition, educational
agencies had the option of using assessment instruments other than that developed by San Diego, and could also use a diagnostic instrument to determine more clearly specific strengths and weaknesses of their LES/NES students.

Step 1. All K-12 public school students received the San Diego Home Language Survey, which was completed by their parent/guardian(s). This survey form was provided by the state and was intended to meet that provision of the law requiring home language determination as well as identifying students who were potentially limited and non-English-speaking.

For the 1977-1978 census, the state provided translations of the Home Language Survey in Spanish, Cantonese, Pilipino, Vietnamese, Portuguese, Korean, and Japanese. It was, however, the responsibility of school districts to determine the home language of students from all language groups.

Step 2. Students identified as potentially LES/NES were tested on the San Diego Observation Assessment Instrument, as modified, to determine language fluency.

The San Diego Observation Assessment Instrument was provided by the state in the seven major primary languages which account for the majority of students in the 1976 LES/NES state total: Spanish, Cantonese, Pilipino, Vietnamese, Portuguese, Korean, and Japanese. Because the Department of Education recognized that some districts had students whose primary language was other than the designated seven, assistance in translation of both San Diego instruments for other languages was provided to those districts upon request. While the department was provided the San Diego Observation Assessment Instrument free of charge, it was determined at that time that educational agencies would have to pay for census administration from district base monies.

Step 3. As an alternative to Step 2, educational agencies that so desired could use a test other than the San Diego Observation Assessment Instrument. These agencies were advised that such a test could be used provided that at the minimum the test met the following criteria: provided for the identification of limited and non-English-speaking fluency status; was an individually administered test; was in English and in the primary language(s) being assessed (i.e. Spanish, Cantonese, Pilipino, etc.); possessed a technical report including reliability, validity, and norming data.

Educational agencies using other than the San Diego Observation Assessment Instrument bore all cost, inservice training and other responsibilities associated with such tests.
Step 4. Administration of a diagnostic instrument to identify LES/NES students so as to determine their strength and weaknesses in English in the language skills of comprehension, speaking, reading, and writing.

The procedures I have described were revised through the enactment of AB 3470, signed into law in 1978, which required assessment of the student's English language proficiency. The bill in particular stated that an English language proficiency instrument must be administered to all pupils whose primary language is other than English as determined by the Home Language Survey this year in order to identify those students who are LES. This was to be accomplished by one of the following three approaches.

1. A district would select an instrument from a listing of instruments designated by the department. The assessment of English language proficiency was to be completed within 30 days after enrollment. When there was reasonable doubt as to whether the student was LES according to the assessment results or a request was made for further assessment, a second English proficiency assessment would be conducted within 60 days after enrollment. Districts were to assure that the assessments were conducted by persons who spoke and understood the primary language of the target pupils and who were trained in the use of the instrument to determine which pupils were LES.

When a district was unable to obtain the services of a test administrator who spoke and understood the pupil's primary language, and where the primary language was spoken by a small number of pupils, the district superintendent requested a waiver of this personnel requirement. The request certified that the district was unable to comply and the certification included a statement by the district superintendent that the chairperson of the district advisory committee on bilingual education had been consulted and was unable to assist in locating appropriate individuals to administer the test or to prepare a test.

2. A district petitioned the department for approval to use an alternative English language proficiency instrument. The use of an alternative instrument must be consistent with the provisions of Section 52164, as delineated in Step 3. Approval to use an alternative instrument carried with it the same personnel and time conditions that were applicable to the use of a state-designated instrument.

3. A district could also seek approval from the department to follow federal requirements regarding the census so long as language skills described in the State's Bilingual Education Act were assessed, and so long as a federally approved census procedure was consistent with the provisions of Step 3. Approval would exempt the district from following the state
recommended census procedure. In considering a request of this nature, the department did seek assistance and clarification on the matter from the Office for Civil Rights, Region IX, Department of Health, Education and Welfare.

When a parent, guardian, teacher, or site administrator claimed reasonable doubt regarding the accuracy of the pupil's designation as NES, LES, or fluent English-speaking (FES), a reassessment of the pupil's English language skills was conducted. The parents/guardians of the pupils were notified of the results of the reassessment in writing. A kindergarten or previously untested first grade pupil enrolling in a school for the first time and who spoke a language other than English at home could be enrolled as a LES student in a bilingual program until the assessment of English language skills was completed. AB 3470 also included specific language requiring the identification of LES/NES students enrolled in special education classes. Obviously, the challenge to the State Department of Education and districts having to meet this requirement became tremendous since the availability of appropriate instruments was practically nil.

The Department of Education, after a nationwide search for appropriate instruments for all students, including those in special education classes, provided the school districts with the following four approved instruments:

1. **Language Assessment Scales (LAS).** The LAS is an English/Spanish K-12 test of oral language. It assesses four psycholinguistic subsystems: phonemic, referential, syntactical, and pragmatic. Administration time ranges from 15 to 20 minutes.

2. **Bilingual Syntax Measure (BSM).** The BSM is a K-12 English/Spanish/Pilipino oral language test. It assesses basic syntactic structures, structural proficiency in English, structural proficiency in Spanish, and degree of maintenance or loss of Spanish. Administration time ranges from 15 to 20 minutes.

3. **Language Assessment Battery (LAB).** The LAB is a norm-referenced K-12 test in English/Spanish. It assesses reading, writing, listening, comprehension, and speaking. There are separate sets of tests for each language (English/Spanish) and for each grade level (K-2; 3-6; 7-12). The K-2 level is individually administered in 5 to 10 minutes; grades 3-6 and 7-12 levels are group administered in 41 minutes.

4. **Basic Inventory of Natural Language (BINL).** The BINL is a K-12 measure of oral language in English and Spanish based on a 'natural' language sample. The focus of assessment is vocabulary, structure, and morphology.
A status statement on the reclassification of LES/NES students. Staff of the Department of Education, working with an ad hoc committee consisting of practitioners, experts in research and statistics, and educational methodologies, have recommended to the State Board of Education a framework to be used in the development of reclassification guidelines which will be provided to school districts as they begin to make decisions leading to the reclassification of limited English-speaking students to fluent English-speaking status. These guidelines are expected to be completed before the end of the 1979-80 fiscal year and will be distributed throughout the state.

We in California are convinced that unless proper identification is made of our LES/NES students, it will become difficult to develop appropriate treatments which will result in the acquisition of good standard English. Also there must be a very carefully developed and sophisticated process used in reclassifying the LES student into FES status. Not to do this could result in disaster and do great harm to the very population for whom bilingual education was designed.

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Background. Illinois has actively supported bilingual education programs for almost a decade. Beginning with $200,000 appropriated by the General Assembly in 1970-1971 to fund an experimental program in five Chicago schools, the state-funded program (mandated since 1976) presently provides bilingual instruction in over 30 languages to 40,000 children of limited English proficiency (LEP) in the Chicago public schools and 83 school districts throughout the state. The appropriation level in FY 1980 is $16.5 million.

As in most states mandating bilingual education, the Illinois law requires the establishment of a transitional bilingual program. Student participation in the program is limited to three years 'or until such time as (the student) achieves a level of English language skills which will enable him to perform successfully in classes in which instruction is given only in English, whichever shall first occur' (School Code of Illinois, Article 14-C-3).

Questioning the steady increase in the number of students enrolled annually in transitional bilingual education programs and the corresponding increase in the annual appropriation request, the General Assembly has begun to question the effectiveness of the program. Specifically, legislators want to know:

1. Are students in bilingual education programs learning English?
2. Are students 'transitioning' out of the bilingual program into all-English classes?
3. How many students exit the program each year and for what reasons?
These concerns led the General Assembly to request an outside evaluation of the Illinois Transitional Bilingual Education Program. In June, 1979 L. Miranda and Associates presented their findings to the Illinois State Board of Education. The evaluation determined that bilingual programs were meeting their objectives and that between 17 percent and 24 percent of students enrolled in bilingual programs exited the program each year. The evaluation also pointed to the need to establish a management information system to maintain complete, accurate, uniform, and comprehensive program data at the state level.

In response to these recommendations as well as to the increasing demands for program accountability on the part of the General Assembly, the Illinois State Board of Education has undertaken a complete revision of its annual census procedures (including the determination of student eligibility and program participation in Transitional Bilingual Education Programs) and has developed statewide procedures for data collection and program administration.

Student assessment and data-gathering procedures. During the 1979-1980 school year, the Bilingual Education Section, Program Evaluation and Assessment Section, Research and Statistics Section, and Data Management Section of the Illinois State Board of Education have worked cooperatively to develop and implement new procedures for data collection and program administration. These procedures consist of the following components: (a) Public School Bilingual Census, (b) Program Application, (c) Student Cumulative Record, and (d) Annual Program Report. (Sample forms are available from: Illinois State Board of Education, 100 North First Street, Springfield, Ill. 62777.)

Public School Bilingual Census. According to the School Code (Art. 14-C-3):

Each school district shall ascertain not later than the first day of March, under regulations prescribed by the Superintendent's Office, the number of children of limited English-speaking ability within the school district and shall classify them according to the language of which they possess a primary speaking ability and their grade level, age, or achievement level.

The Public School Bilingual Census has been designed to identify all non-English language background students and to distinguish which of these students are eligible for program participation. Census forms are distributed annually to all school districts in January and are due at the Illinois State Board by March 1. Each attendance center must fill out a form. Students are recorded according to language in one of three columns. Column A is provided for students with a non-English background who are attending classes at the attendance center. Column B is provided for students reported in column A whose
English proficiency level is below average in aural comprehension, speaking, reading, or writing in English as determined by district personnel in accordance with a state-approved district assessment procedure. Column C is provided for students reported in column A whose English proficiency level is equal to the state-approved norms or average.

In order to conduct the census, each LEA must have developed a district assessment procedure. This procedure must contain:

(a) A description of the district procedure for the identification of students with a non-English background specifying the instruments or other assessment strategies used, including the individual(s) responsible for implementing the procedure and the training to be received by the person(s) who will perform the identification. For example, STUDENT IDENTIFICATION must include: PROCEDURE for identification of non-English background students, INSTRUMENT specification, WHO assesses students from non-English background, TRAINING of the assessor.

(b) A description of the district procedures for evaluating the English proficiency of students whose first or native language is English, specifying the instruments and/or procedures to be used, including the person(s) responsible for the English proficiency evaluation and the time the evaluation will occur. For example, EVALUATION must include: PROCEDURE for evaluation of native English-speaking students' English proficiency, INSTRUMENT specification, WHO assesses English language proficiency of native English speakers, TIME of evaluation.

(c) The average English proficiency, performance, or achievement level by grade or age equivalent for students whose first, or native language is English. For example, PROFICIENCY LEVELS must include: STATEMENT of local average proficiency levels for EACH age or grade level for native English-speaking children.

This procedure is reviewed by the Bilingual Section and Evaluation Section staff at the Illinois State Board of Education. If the district assessment procedure is unsatisfactory, technical assistance is provided. Since this was the first year of this procedure, five regional technical assistance workshops for district evaluation staff were conducted prior to the census. These sessions helped districts not only in the preparation of their assessment procedures but also in improving their knowledge of assessment instruments.

The new student assessment requirements also reflect the State Board's position as stated in their newly adopted Policy Statement on Bilingual Education:

The State Board of Education believes that the educational needs of each student limited in English proficiency should be met. The Board shall approve the standards by which
the district determines the eligibility of its non-English background students for transitional bilingual education programs and services. The required primary criterion for eligibility and successful program completion for each non-English background student shall be an acceptable measure of English proficiency as compared with peers whose first or native language is English.

The Program Application is prepared by each school district planning to conduct a bilingual education program the following school year. It is due May 1. The Program Application is designed to provide program descriptions at the attendance center level. The number of students must correspond to the number given on census column B; otherwise, an explanation must be attached. The application provides the LEA with the opportunity to request that some eligible students be exempted from program participation. However, an explanation must be attached including a description of the needs assessment that was performed and the instructional program which will be provided instead of bilingual education. Information is recorded which includes a personnel summary and a program summary by language group for each attendance center in the LEA. The application also contains the district assessment procedure.

The Student Cumulative Record is designed to provide local districts with a vehicle for collecting information about students at each attendance center. The Student Cumulative Record remains in the district and serves as the basis for required end-of-year reporting. This document has been designed to follow the student over a three-year period even if the student transfers to another school. Provisions are also made for a fourth or follow-up year. Recorded on this form are data on individual student progress in English, home language, and subject matter skills. Important program information such as minutes of English as a second language (ESL) instruction per day, minutes of instruction per day using the native language, minutes of English instruction per day (excluding ESL), and total days present during the year, is also recorded. Also recorded are data on program entry, e.g. entry date, years in other programs and exit (e.g. exit date and exit code). The bilingual program exit codes are as follows:

1. Transitioned: Student able to perform successfully in an all-English classroom as determined by district exit criteria.
2. Involuntary program termination: Student has moved or been promoted within the district to an attendance area which does not require or offer a bilingual program.
3. Voluntary program termination: Student has withdrawn from the program at the request of the parents.
4. Dropped out of school: Student has dropped out of school but still resides within the school district.
(5) Other: Student has either withdrawn from school and moved to another district or his/her status is unknown.

The Annual Student Report is a computer-generated turnaround document which is submitted to the State Board of Education in July. LEAs are expected to compile student data which will provide a basis for statewide evaluation activities to assess overall program effectiveness. Individual student information is reported by student ID number and includes scores on English language proficiency, instruments used, attendance and other programmatic information, e.g. the amount of time spent daily on ESL instruction, native language, and English language instruction.

A comprehensive evaluation report based on information gathered from the Bilingual Census, the Program Application, and the Annual Student Report is to be prepared annually and disseminated to members of the General Assembly, local education agencies, institutions of higher education, parents, and community representatives and other concerned citizens. The report will include a descriptive section which will emphasize the unique programmatic characteristics of each bilingual program in Illinois and a quantitative section which will address these evaluation questions:

(1) What is the total number of identified LEP students by language who were adequately and appropriately served through state-funded transitional bilingual education programs during the preceding school year? In order to demonstrate the extent to which students were served or underserved, one or more of the following will be included: pupil/teacher ratio, full-time equivalency ratios, type of teacher endorsement, program model type (self-contained, pull-out, etc.).

(2) What is the total number of identified LEP students by language who were underserved through state-funded Transitional Bilingual Education Programs during the preceding school year?

(3) What is the total number of identified LEP students by language who were not served through state-funded Transitional Bilingual Education Programs during the previous school year?

(4) What entrance criteria are utilized to determine student participation in the Transitional Bilingual Education Program?

(5) How many students left the Transitional Bilingual Education Program during the preceding school year?

(6) Of the students leaving the Transitional Bilingual Education Program, what were the reasons?

(7) How many students were exited (successfully transitioned) and found able to perform successfully in an all English classroom as determined by district exit criteria?

(8) To what extent do students in the Transitional Bilingual Education Program show evidence of progress in English language skills?
(9) How many minutes per day of ESL instruction did students in Transitional Bilingual Education Programs receive?
1. Introduction. China has three dimensions of bilingualism. 

(1) Non-Han Chinese are increasingly bilingual in their own minority language and in Putonghua, the standard language of China. Small groups of Han Chinese who reside in non-Han areas or who work with non-Han populations are bilingual in one or more minority languages and Han dialect(s). (2) Han Chinese whose native language is a Sinitic language other than the standard Putonghua are increasingly bilingual in their native tongue and Putonghua. (3) Through intensive government effort, widespread foreign language instruction is producing a small but growing population bilingual in Han language(s) and foreign tongues.

Foreign language instruction and its structure and results have been described in several places (Cowan et al. 1979; Light 1978a, 1978b; Lehmann 1974; Hsu 1979). For this reason, foreign language education—that is, instruction in languages that are native to no native citizens of China—will not be discussed in this paper.

Of the remaining two dimensions of bilingualism—Han/non-Han bilingualism and multiple Han competence—much more will be said about multiple competencies among Han speakers than about multiple competencies involving a Han and a non-Han language. Sinitic multilingualism is the defining characteristic of language use in China, and contact with a variety of Han languages is a common feature of ordinary life in China. The lack of a universally spoken, homogeneous Han language symbolizes China's traditional language problem. The promotion of the standard language has been the principal linguistic goal of the current government during its three decades of authority. For the foreign observer it is much easier to survey multilingual practices within the Han language family than between Han and
non-Han language groups. Non-Han languages are generally confined in use to specific, limited areas of China, and most of those areas are near the periphery of the national borders and away from easily accessible centers of population. Naturally, despite the emphasis in this paper, China's non-Han language composition is very rich and complex. In addition to Sinitic and non-Sinitic Sino-Tibetan languages, there are Chinese citizens who natively speak languages of the Altaic, Austronesian, Tai, and Malayo-Polynesian families. When it is possible to give a broad account of this dimension of multilingualism in China, that account should prove to be most instructive both in the highly complex linguistic and cultural groupings in East and Southeast Asia, and in the strategies that different groupings adopt for living contiguously. For this paper, only a brief note on non-Han language use will be included.

2. China's languages. Before recounting observations on multilingual behavior, it may be helpful to give a brief account of the language groups to be found in China and their general locations. Readers interested in the subject are urged to consult Li (1973) for a very concise description of China's major language groupings. In addition, Chang (1967), Egerod (1967), and Benedict (1972) are easily obtainable sources on China's languages, and Forrest (1965) contains standard chapters on the subject.

It is generally agreed that there are four major branches of Han languages. They are the Mandarin (Guanhua) branch, the Wu branch, the Min branch, and the Yue branch. The Mandarin branch extends in an arc from the east coast of China north of the Yangzi (Yangtze) River into Manchuria, across to the west and clear down to the southwest corner of China. Speakers of the Mandarin branch are estimated to number in the range of 600,000,000 or more. The popularly known urban standard language of this branch is the language of Peking (Beijing). The Wu languages are spoken largely in Jiangsu and Zhejiang provinces, on the central east coast. The language popularly identified with the Wu group is Shanghai. The Min group is spoken mostly in Fujian (Fukien) and Taiwan provinces. Usually divided into Northern (Fuzhou city) and Southern (Taiwan, Amoy) Min, this group is itself so complex in manifestation that no single focus point is taken to represent it in popular conception. Yue is spoken in Guangdong (Kwangtung) and Guangxi (Kuangsi) provinces. Cantonese as spoken in Guangzhou (Canton) and Hong Kong is usually accorded standard status for this branch. Speakers of each of these branches number in the several tens of millions.

In addition to these major branches, there are small groups of Han languages which can be identified with none of the major branches. Prominent among these are Hakka (Kejia), spoken in linguistic islands in many parts of China; Xiang,
spoken in parts of Hunan province; and Gan, spoken in Jiangxi.

These branches or groups of Han languages are the often mentioned 'dialects' of Chinese. In almost all linguistic senses, the principal tongues of these groups are separate languages because they are spoken in definable places by identifiable populations and are mutually unintelligible at least to the degree that the Romance languages are mutually unintelligible. Politically, they are all Chinese because they are related languages native to China's dominant ethnic group, the Hans, and China is a recognized political entity with a long-standing common history. Within each group are many dialects or sub-dialects, some of which are also almost mutually unintelligible. In the border areas between principal locales of representative members of dialect families, there are creoles that share features of more than one dialect group. Thus, the behavior of these languages is that of other recognized languages -- apart from political considerations -- with one significant linguistic exception.\(^2\)

That exception is the written language. Unique among modern languages in its use of a logographic script, the Sinitic language group is also unique in that the vocabulary and grammar of the written language are almost uniform to all of China, despite radical differences in vocabulary and grammar among the dialect groups. While the differences in vocabulary are actually greater, it would be unwise to underestimate the differences in grammatical structures among the dialect families. Boyle (1970:24-25) notes that in her Cantonese textbook she abandoned a plan to list parallel Mandarin structures because she found more differences than anticipated. The common written syntax and diction are based on the standard language, known as Putonghua in the People's Republic and as Mandarin in English. Following common practice, I shall henceforth refer to the standard language as MSC (Modern Standard Chinese). Those whose first language is other than MSC learn a second language when they learn the written language. This was true of all China prior to the foundation of the People's Republic. It remains true of areas outside of mainland China proper, such as Hong Kong and Taiwan. For a very long time, being literate in Chinese has meant, for some groups, being bilingual.

Pronunciation is not directly involved in literacy. But it is directly involved in the bilingualism represented by literacy in Chinese. It is the phonology of each dialect that governs the pronunciation of the written form of Chinese for the area in which that dialect is spoken. That is, although the syntax and diction of any written passage created or read by a Cantonese speaker are identical with any passage created or read by a speaker of MSC, the reading pronunciations of the two differ greatly. The illiterate Cantonese speaker may have difficulty comprehending the passage when it is read aloud (because of unfamiliar vocabulary and different grammar), but he or she
will have no difficulty identifying the material as Cantonese. Although the phonology remains the same for the written and spoken versions of all dialect groups, that phonology accommodates written and historical differences by allowing for multiple pronunciations for many characters. These multiple pronunciations—all being syllables fully pronounceable within the phonology of the spoken language of each dialect area—are the result of waves of immigration and influence from the standard language among the educated in various historical periods.

To give a simple example, the character for 'listen' is \( \text{\textcircled{\(t\)}} \). When read from a written page, it is pronounced \( \text{t\(ing\).} \). When the same morpheme is spoken in ordinary speech, it is conservatively \( \text{t\(eng\}.} \), but in some communities (particularly Hong Kong), owing to a tonal merger, it may be pronounced \( \text{\(\text{\textcircled{\(t\)}}\)eng\), which makes it homophonous with a quite distinct morpheme 'living room', which pronunciation is \( \text{\(\text{\textcircled{\(t\)}}\)eng\),}\). The literate monolingual speaker of Cantonese therefore has a bilingual command of the grammar and vocabulary of Cantonese and MSC, and monolingual phonological command of successive stages of Cantonese development. (In the foregoing example, the -\(\text{\textcircled{\(eng\}}\) -\(\text{\textcircled{\(ing\}}\) doublets reflect an earlier sound change from \*\(\text{\textcircled{\(ing\}}\) to \text{\textcircled{\(eng\}}\), followed by an influx of \*\(\text{\textcircled{\(ing\}}\) speakers from MSC areas, resulting in a doublet split along semantic and/or written/spoken lines. Even illiterate speakers have a command of the doublet system, though specific words may be restricted to those with formal education.)

Non-Han language groups are generally localized in definable areas, which are largely to be found on China's borders. Thus, in northeastern China north of the Korean border, there is a large population of Korean-Chinese speakers of Korean. In the northwest near the Soviet border is to be found a large community of Uighurs whose Altaic language is similar to Kazakh. In the far west are the central locations of Tibetan speakers, and in the southwest are many communities of peoples with relations to Southeast Asia. For speakers of these non-Han minority languages, bilingualism is not as divisible a matter as for Han speakers bilingual in more than one Han 'dialect', and it is therefore more similar to bilingualism in the United States. A speaker of a non-Han language learns a Han language as a second or foreign language and vice versa, and literacy in his or her own tongue is not directly related to this mastery. Although it is simpler to describe the achievement of becoming bilingual in the Han and non-Han languages, the function and use of Han and non-Han languages in bilingual settings are problems as complex (and as interesting!) as are function and use of two languages anywhere.

3. National Language instruction for Han speakers. Both officially and unofficially, Chinese perceptions of the multilingual problem among Hans focus on the lack of a common indigenous spoken language and on the difficulties of becoming
literate in Chinese. In this century, multilingualism among Hans and Han literacy have not been separated. It is considered absurd that a single ethnic group in a politically and culturally unified country—especially the one with the world’s longest continuous culture—should have no common language. It is considered shameful and striking evidence of severe class oppression that midway through this century only a fraction of China’s adult population could read and write. (The figure was probably between 20 and 30 percent in 1949.) The link between the two problems is understandably a political one. It is also a cultural link, since popular perceptions of ‘language’ focus on China’s unique written language and since dialectal mastery is considered a function of locale rather than of education. Most importantly, however, this link between literacy and multilingualism is a genuine linguistic problem for the reasons outlined in Section 2. For most of her history, China’s language of unity has been her written language. That written language has been based largely on the prestige dialect of the time. Those who did not speak the prestige tongue and who wished to participate in national life necessarily learned that tongue in order to function in national society. Those who did not learn some version of the prestige language at least learned the grammar and vocabulary of the prestige language in order to read and write. The totally monolingual speakers—the vast majority of Chinese throughout China’s history—were also illiterate. Those who were literate were bilingual at least in reading and writing and very likely in all the skills.

This link between the problems presented for society by Han multilingualism and the problems presented by widespread illiteracy is the basis for national policy on Han multilingualism. In brief, that policy is as follows. All Han-speaking children are to be instructed primarily via the medium of MSC. In areas where MSC is not indigenously spoken, fundamental MSC is a mandatory part of the first year of schooling. In principle, after the introduction to MSC, the language of the school is MSC and not the local language. In all areas, the sequence of instruction for language arts classes in the first year is: introduction to 'Hanyu Pinyin' (the official romanized alphabet of China), followed by introduction to Chinese characters via Pinyin glosses. In MSC-speaking areas, the introduction to Pinyin is simply instruction (requiring about a month) in a systematic way of representing what the children already know how to say. In non-MSC-speaking areas, the introduction to Pinyin is actually a transition from the local language to MSC, and for this, many months are required.

This policy has three obvious parts and, in fact, a fourth one as well. (1) The elementary school is mandated as the center of the effort to provide China with a common spoken tongue. In Fishman’s terms (1978:409-410), the Chinese elementary school is thus both transitionally bilingual and monoliterately bilingual. Products of elementary schools—and even
more, products of secondary schools--are expected to be able to function in the standard language. (2) The standard language has a unique written form (the Pinyin alphabet) that solely reflects its pronunciation and that is unrelated to standard Chinese writing (characters). During the course of instruction in MSC, this written medium is a major teaching tool. Pinyin is indeed more a teaching tool than a medium of literacy (as would be the alphabets of other cultures) since instruction is based upon the assumption that genuine literacy must come with mastery of characters. As literacy develops, Pinyin recedes in importance to become a tool for glossing pronunciation for unfamiliar characters and an invaluable device for organizing dictionaries. (3) Literacy is both possible and necessary for the whole of China's society, despite the past record and despite continuing problems of enormous population, inadequate national wealth, and (most importantly) the singular difficulties of mastering Chinese characters. Furthermore, literacy and bilingualism for speakers of nonstandard Han languages are seen to be commonly achievable rather than a task too formidable for the average pupil. (4) The unapparent part of the national policy is that reform of the writing system is intimately tied to the expectations given to the school system. Chinese characters are inherently difficult to learn because (to at least some degree) each one must be learned individually and uniquely, and systematic characteristics play only a small part in the overall learning task. But this inherent difficulty is enhanced unnecessarily by many characters having far more than the number of strokes needed to keep them distinguishable and by the fact that there are too many separate characters for infrequent items where homographs would cause no confusion.

Mandated writing reform has led to the simplification of well over 2,000 characters and to the elimination of many. It is hoped that literacy will soon be definable within a list of 3,200 characters, in contrast to the 5,000+ previously required for literacy. The task of the school system is limited by this reform. A further reform espoused by some is the eventual elimination of characters and their replacement by Pinyin. The prospect of this step is surrounded by controversy. If it is implemented, that implementation will not be soon. Nevertheless, introductory instruction in Pinyin takes place in a context where all know that Pinyin, rather than characters, may some day be China's principal medium of literacy.

The introduction to Pinyin in elementary schools reflects the tie between literacy and bilingualism. For first-year pupils, teachers treat classes in a consciously transitional mode. Early months of instruction in non-MSC areas are in the local language, and MSC is introduced through the local language. Pinyin is taught as the symbolization of MSC. As instruction in Pinyin progresses (along with more accurate pronunciation of new lexemes and therefore of the written symbols as well), the teacher uses increasing amounts of MSC in her/his own
classroom speech. This progression is familiar to the foreign-language teacher. Most prominently discussed in MSC in the class are classroom items and material out of the texts. More distant and more intimate subjects are more comfortably discussed in the pupils' first tongue. Yet, although the introduction to Pinyin is the introduction to a new spoken language, and although the Pinyin alphabet is a genuine alphabet, not a syllabic writing system, the organization of presentation is based on phonetic analysis of characters in use in China for over 1,500 years. That analysis, known as the 'fan qie' system, divides the Chinese syllable into two parts, initial and final. The initial consists of the first consonant (if any), and the final consists of the rest of the syllable. In dictionaries which use characters exclusively, this system permits the 'spelling' of characters by identifying the initial consonant of the 'spelled' character with one different character (the 'spell-er') and the final of the 'spelled' character with another different character (the second 'spell-er').

The spelling of Pinyin syllables is learned according to this scheme and not according to our English method of reading out each letter by its letter name. In this system, the letters themselves have no names. Instead, the relevant element is read for its phonetic value, except for initial consonants, to which are added [ə] for pronunciation. The words for 'dog' 꼭ou, 'paper' 策hi, and 'person' 人en are spelled as follows:

<table>
<thead>
<tr>
<th>꼭ou</th>
<th>გə</th>
<th>გə</th>
<th>ou</th>
<th>ou</th>
<th>꼭ou</th>
</tr>
</thead>
<tbody>
<tr>
<td>策hi</td>
<td>ზə</td>
<td>ზə</td>
<td>i</td>
<td>i</td>
<td>策hi</td>
</tr>
<tr>
<td>人en</td>
<td>რə</td>
<td>რə</td>
<td>en</td>
<td>en</td>
<td>人en</td>
</tr>
</tbody>
</table>

Choral spelling is conducted in class as though the foregoing were read across. It is assumed that native speakers of any Sinitic language will possess a phonological competence that will make this division of the syllable seem natural and permit the substitution of this MSC syllable type for similar syllable structures in other languages. There is sound linguistic support for this assumption (Light 1976) and for the broader assumption that Chinese speakers learning new 'dialects' master the transfer of phonology according to the traditionally isolated components of the syllable.

Formal attention is given to MSC vocabulary in the form of treating diction for correct writing. Some attention is also given to standard grammatical patterns as well. However, apart from the teacher's model and on-the-spot correction of clear errors in MSC, it is unclear to me how much formal attention is given in schools to differences between the standard spoken language and local languages in grammar and syntax. The lack of prominence of this kind of instruction is certainly not owing to lack of awareness of the differences. Vocabulary differences among the Han languages are a subject of frequent popular comment. While less noticed popularly,
syntactic differences are observed via the kinds of errors that nonstandard speakers make when speaking MSC. Furthermore, there is a very serviceable set of contrastive studies comparing MSC with the major 'dialects'. These were prepared in the late 1950s and early 1960s and were directed towards the problems of teaching MSC to speakers of other Han languages. These handbooks are a product of what may have been the most massive dialect survey ever undertaken and constitute perhaps the most extensive practical and concise series of contrastive analyses ever produced. This work was a direct outgrowth of national concern for language unity and of the policies outlined earlier in this paper. The late 1950s and early 1960s saw a flowering of linguistic interest and activity in China, a level of activity that was reduced to inertia during the Cultural Revolution and that is only now being reinvigorated.

The kind of schooling I have described here is linguistically immersive in that pupils are expected--after a transitional period--to function in school life entirely in MSC. In fact, the Chinese education system exemplifies both immersion programs and submersion programs, in Swain's (1978) division. In Swain's analysis, an immersion program caters to a linguistically homogeneous student population which is required to use a second language in school. A submersion program caters to a divided student population. Some pupils speak the school language at home, while others do not. Those who do not, obviously, must 'fit in' and master the school language as a second tongue. Swain contrasts immersion and submersion programs in Quebec and concludes that submersion programs are largely a failure because they do not account for the foreignness of the new tongue to the nonnative students, but expect all present to conform to native standards and pace.

In contrast, immersion programs are held to be successful to a point—the point being that progress in language control seems to cease development when the pupils attain a command which adequately meets their needs as nonnative speakers operating in a context wherein the only native speaker is the teacher. Because of geographical and social mobility, some schools in major population centers are submersion models. Most schools in areas where MSC is not spoken natively are immersion models. I have seen no evidence to indicate that the submersion programs in China are failing to teach MSC. To the contrary, the schools I have observed in the People's Republic of China and during several years' experience in Hong Kong suggest that such submersion programs in a Chinese context are quite successful in imparting an impressive command of the target language. (In the People's Republic proper, that language is MSC; in Hong Kong, it is Cantonese.) However, such programs are indeed illustrative of 'subtractive bilingualism', in Lambert's term. For it is usually the case that children of parents whose native language is other than MSC and who live in an MSC-speaking area rapidly become more
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proficient in MSC than in the home language, and some products of MSC-speaking schools in MSC-speaking areas have indicated to me a strong reluctance to speak their parents' tongue (even though it was the tongue of their home during their whole upbringing) for fear of speaking it wrongly. The immersion schools (which are the more common) reflect the success and limitation that Swain suggests for French schools in Quebec. However, the immersion schools are also partially subtractive in the Chinese context, for reasons that can be most easily described by a discussion of two mini-experiments conducted in a primary school in Canton. Both involved fourth graders.

In the first experiment, pupils were asked to read two columns of single characters, two columns of two-character compounds, and five words. These are given in the Appendix to this paper. The romanizations that follow each item are the Pinyin MSC romanization and the Yale Cantonese romanization, respectively. Owing to time constraints, only four children were able to take part in the test, which involved reading all the items aloud in MSC pronunciation and in Cantonese pronunciation. Column B and Column D contain items that are equally part of the lexicon of Cantonese, MSC, and written Chinese. It was expected that pupils would have little difficulty in reading this list fluently in either pronunciation. This expectation was fulfilled, except that the eighth character in the single-character list was entered by mistake, since its usual meaning in MSC is 'study', while its Cantonese meaning is 'memorize and recite', and this character alone caused slight hesitation among oral readers. Column A of the single-character list was read more slowly in Cantonese than Column B by all participants. This was predicted. None of the items in Column A would be high-frequency items for readers of Chinese to know in Cantonese if their schooling had been in MSC. Item A.1 is the standard Cantonese word for 'eat', which is used only classically in writing, whereas A.9 is the normal written and MSC word for the same meaning, and that word is never spoken in Cantonese. The remaining eight characters are never spoken in Cantonese, but are replaced by etymologically distinct counterparts. It is not surprising that the Cantonese pronunciations had to be 'fished for'. While a part of the phonological system of Cantonese, these pronunciations are not formally taught as pertinent to these characters, which for educational purposes have only an MSC pronunciation.

Column C in the two-character compound list in the Appendix contains a mixture of items: some reflect MSC/written usage, and would not be used in spoken Cantonese (C.1 'walk', C.3 'name', C.6 'read', C.7 'very tall', C.9 'return home', C.10 'yesterday'); others reflect usage common to MSC, Cantonese, and written Chinese: C.2 'write a composition', C.4 'work, be occupied'; while others reflect Cantonese usage: C.5 'speak', C.8 'go out/walk on the street'. Those items that reflect MSC/written usage were read most fluently and with the least
hesitation by all four pupils. This ease of reading aloud pertained to items common to MSC, written Chinese, and Cantonese. But the two items which reflect Cantonese usage and not MSC/written usage required noticeably longer response times, and for two of the pupils prompting was required.

The five sentences at the end of the task were read fluently in MSC pronunciation and rather haltingly in Cantonese. Underneath the sentences appear three romanizations: Pinyin (MSC), Cantonese reading pronunciation, and a transcription of what normal speaking usage would be in Cantonese. The latter two differ as to where hesitations and errors occurred.

Informal as it is, this brief 'experiment' confirms what one would expect. The school language is MSC. MSC is introduced with written Chinese, which is given a unique MSC pronunciation. Reading and writing are school tasks. Consequently, although all the pupils have a complete native command of Cantonese and Cantonese phonology, it is clearly more difficult for them to read Cantonese items than to read written items that reflect MSC. The relative difficulty of Cantonese items includes those items which are highly frequent in spoken Cantonese but are not used in writing, and also those which are common in writing but which have different lexemes in spoken Cantonese.

This result seems to confirm a frequent informal observation. Most Chinese speakers whom I have had the opportunity of observing in both speech and reading seem to have only one fluent reading pronunciation, regardless of how many Han dialects they may speak with great ease. Having to read in a dialect other than one's principal school dialect appears to mean having consciously to attach unusual pronunciations to symbols which automatically stimulate only one set of phonetic responses. Once a friend was asked to read a familiar poem in his native dialect. In order to do this, he closed his eyes so as to rely on memory and not on the written text, which called up MSC pronunciations. There seems to be an isomorphic relation between a given pronunciation and Chinese characters.

The second 'experiment' was even less formal than the first. After the foregoing exercise in reading was completed, the writer chatted briefly with each of four children regarding school, play life, home, and parents' occupations. The conversations were carried on in both MSC and Cantonese, beginning in MSC. Topics concerning school were discussed fluently in MSC. There was little noticeable hesitation and no hunting for proper words. Aside from expected Cantonese 'accents', there did not seem to be any nonstandard usages. Indeed, the children occasionally corrected the writer, whose MSC is clearly that of a foreign learner. The initial portions of conversations on play life, home, and parents' occupations were carried on equally well in MSC, but at some point each of these topics required code-switching. For one pupil this
took the form of asking his classmates in Cantonese how to say
the type of factory where his father worked. For another, it
took the form of asking the writer how to say a few terms.
For everyone, at some points there was an automatic (uncon-
scious?) switch to Cantonese to refer to things that are more
commonly (or solely?) talked about in Cantonese.

When asked about when and where they used what language,
the children were consistent in identifying MSC with school and
Cantonese with the rest of life. Of course, they acknowledged
familiarity with the national policy that everyone should be
fluent in MSC and indicated that in growing up, their command
of MSC should grow so that they would be able to talk about
most things in it.

Informal observations elsewhere help interpret this experience.
Walking in the streets, shopping, going to an amusement park,
dealing with hotel personnel, riding buses—in all these activi-
ties Cantonese is the language that one routinely hears. At
the same time, it is possible to take care of the necessities of
life (shopping, buying tickets, getting transport, etc.) by using
only MSC, and with some people it is possible to converse
in MSC 'out in the streets'. However, in my experience, once
Cantonese is introduced most speakers of Cantonese in Canton
readily show preference for using it. In contrast, nonnative
Cantonese speakers who are resident in Canton are often ex-
travagantly reluctant to use Cantonese even though they under-
stand it easily. For these speakers, even heavily accented
MSC is preferred. Interestingly, in terms of language- and
group-identification, natives of Guangdong Province (where
Canton is located) who do not speak Cantonese will prefer MSC
to what is clearly an embarrassing struggle with Cantonese.

In contrast to the apparent picture in Canton, in a Shanghai
primary school, teachers and pupils agreed that MSC was be-
coming a home language for many families. Children indicated
that, while among siblings and in other peer groups the strong
likelihood was that Shanghai dialect would be used, it was
possible for them to carry on with MSC with little sense of
inadequacy, and several children said they did just that.
Casual listening turned up a good deal more MSC between
children in Shanghai than in Canton. Shanghai adults whom I
have known have also indicated that MSC was used as one of
two home languages in their upbringing, and some Shanghai
speakers who have been away from Shanghai for a long time
profess strong reluctance to use the language when they re-
turn to Shanghai.

Since MSC is introduced together with Pinyin (which becomes
a teaching tool for MSC) and characters, it is interesting to
record a few observations on the use of Pinyin. In the Shang-
hai primary school mentioned previously, a fifth-grade girl was
asked to transcribe what the principal was saying during a
briefing. The transcription of a few sentences in Pinyin was
a laborious process, and the result was far from accurate
spelling. The same sentences written in characters were taken down quickly and without error. A pair of simple sentences written in characters were given to her to read. Reading them in MSC presented no problem. When she 'read' them in Shanghai, she actually translated them into colloquial Shanghai and substituted Shanghai lexemes for MSC lexemes reflected in the characters themselves.

In Xi'an, a city within the Guan family area (to which MSC belongs), the local dialect prevails in ordinary conversation, though the use of MSC in most situations is clearly understandable to residents. At the same time, facility with Pinyin appears not to be widespread. A symbolic instance occurred in the visit of the United States Applied Linguistics Delegation: on the street one member of the delegation asked a teenage boy to read a store sign in Pinyin. He did so fluently. When asked if it was easy, he replied that in fact he found Pinyin impossible to read and had read it by reading the characters underneath the romanization.

The picture that emerges from these impressions is that language use in China is heavily domain-centered. For children in school, the domains are simple: school vs. most of the rest of life. I believe that in more complex ways this pattern continues for adults. In urban areas there is more MSC spoken than in surrounding non-MSC rural areas, and the country-born person who lives 'between' farm and city performe masters two languages. Subtler than this, however, the domain-based command of two (or more) Han languages pertains with adults as much as it does among the Canton primary pupils I have discussed. For shop clerks in large department stores it is a common and easy task to work in MSC, even where the native language is another tongue. However, conversations on more intimate topics rapidly tend to shift to the local language if both speakers are able in that tongue. This kind of code switching is not simply geographical and does not operate simply between 'dialects'.

In general, MSC is more widely used among individuals and groups who are, in the activity connected with speech at the moment, close to the center of Chinese public life. In contrast, where there is a Han alternative to MSC, that alternative is more widely used among individuals and groups who are, in the activity connected with speech at the moment, relatively removed from the center of Chinese public life. The center of public life refers to participation in institutional activity, political activity, interchange with groups other than those with whom one regularly associates. In general, rural workers live their lives more removed from this public center than do urban bureaucrats, though upwardly mobile rural leaders clearly lead a public-centered life. No individual leads a wholly public or wholly private life. In the more intimate areas of life, even the most public figures have occasion to switch to the code of intimacy. This principle of proximity to the public center
applies to register-switching as well. Thus, those lexemes (and uses of old lexemes that are defined as new) which are identified with change since the founding of the People's Republic are generally more frequently used in public than in private life. There are many such lexemes because of the massive social changes that China has undergone (cf. Tai 1976) but their use is not uniform among different individuals or within the speech of any individual. Rather it follows a gradient leading from nonpublic to public life. A similar gradient seems to prevail in alterations that have taken place in women's speech over the past 30 years. Among Cantonese women, there is a clearly decreased use of language marked for femininity while at work, while participating in labor movements, in political and other meetings, and with official and new contacts. However, in the home and with intimates the former usages still prevail (Light forthcoming).

It is in the context of this domain-centeredness that bilingual instruction among China's Han speakers is partially subtractive. In the crucial MSC domain (the school), the most marked school activity (learning to read) is rapidly becoming an MSC activity only, and reading in dialect is disappearing. To an apparently lesser degree, oral fluency in connection with intimate subjects is greater in an available alternative to MSC than in MSC. Even among speakers who attested to speaking MSC in all contexts, I have never met a person who had had extensive contact with more than one domain and who claimed total inability to use the tongue proper to that domain.

4. Standard language instruction and use among non-Han speakers: A brief note. China's policy towards ethnic minorities is explicitly egalitarian. Minorities are officially recognized in law. Minorities' rights in preservation of culture and language are protected. Minority institutes (which study and teach minority languages and provide instruction in MSC for minority peoples) are supported by the state and are a focal point for minority interests. At the same time, however, national policy supplies an important place for MSC instruction among minority groups so that China will eventually have at least a lingua franca that can be relied on for common communication.

Because of the crucial place of writing in Chinese society (cf. Seybolt and Chiang 1979), the role of writing among minorities is a rather larger issue than it is in other bilingual societies. Ultimate policy aims to provide a roman alphabet for all of China's languages. The basis of the alphabet will be Pinyin, with variations to account for phonological characteristics not expressible in Pinyin. For the larger linguistic groups, however, continued use of traditional orthographies is accepted so that, for example, Tibetan, Mongolian, and Korean are all written in the alphabets usually associated with those languages.
Schooling opportunities provide a linguistically mixed picture. Basically there are three types of schools attended by linguistically competent minorities. (1) There are primary schools that are little different from those attended by non-MSC-speaking Han children. It appears that such schools prevail in marginal areas, where there are mixed populations. These schools would be considered 'submersive' in Swain's dichotomy in that they foster acquisition of MSC through sudden immersion in MSC as a school language among a school population part of whom speak MSC natively. In such schools--even where there is no significant MSC-speaking population--the minority language clearly takes a distant second place, and accounts by parents and educators agree that pupils in such schools retain a rather low-level command of the minority language. (2) There are primary schools where teaching is in the local language, with MSC taught as a second-language school subject. Such schools appear to be most common in areas with large minority populations among whom there is a small ratio of MSC speakers. (3) There are special bilingual schools. Not many in number and probably found mostly in urban areas, these schools attempt to provide an opportunity for equal mastery in MSC and the native tongue. Language work and some subject work are offered in both languages, and pupils are expected to be able to handle nearly a full range of school activities in either tongue.

So sketchy an acquaintance with non-Han bilingualism makes it even harder to describe results of schooling than it is with Han bilingualism. Observations from a Korean-speaking area of Manchuria are at least accurate for that language community, if not indicative of trends for the nation as a whole. The populations of the cities of Jilin (Kirin) and Changchun and the surrounding countryside are in large part ethnically Korean. In much of the countryside, Korean is spoken as the commonest language, and farmers are often monolingual in that language alone. In the cities of Jilin and Changchun proper, MSC is making dramatic advances. It is heard commonly on the streets, and there is no difficulty in communicating in MSC concerning daily life. The dominance of MSC is not unexpectedly reflected in school choices. In Changchun there is a Korean middle school (high school), of the sort mentioned in (3) in the preceding paragraph. However, enrollment is comparatively low, and Korean parents who themselves speak MSC indicate strong interest in having children educated entirely in MSC in order to enhance career prospects. Parents and teachers from this setting indicated that the use of Korean is decreasing rapidly, even in homes where MSC is increasingly spoken. In sharp contrast, a work brigade outside Jilin has an overwhelming percentage of Koreans, and business and political affairs are conducted in Korean to the extent that the small minority of Han families living in the brigade have perforce learned Korean. Here, opting for Korean in school (elementary school) seems to
be the norm, and superficial observation suggests that the
Korean standard of the urban bilingual school is not as high
or functional as that of rural schools. Obviously, rural/urban
is not the most enlightening distinction that could be made be-
tween the two schools regarding language use and instruction.
My impression is that at least in the upper grades of the
Korean school in Changchun, formal attention is given in the
classroom to both MSC and Korean and that both are treated
as problems of a standard lower than established norms rather
than as second or foreign language problems.
I am not certain about the introductory years in this setting.
But I suspect that children enter the school with varying levels
of competence in MSC (and also in Korean?) so that the urban
school is probably less oriented towards language teaching in
the regular curricular day than is its rural counterpart. In
some ways, the urban school represents an ideal in that it
maintains and enhances command of Korean while introducing
MSC--thus becoming additive in its treatment of bilingualism.
However, the small enrollment at the school and educators'
comments about the school, along with others' observations of
its standards suggest that it has less prestige in the community
than monolingual MSC schools or rural bilingual schools (where
there are no alternatives in any case). If that is the case, I
would question what happens to self-images and to learning as
a result.
The area just discussed--Changchun-Jilin--is at the western
extreme of the Korean area of Jilin Province. Travelling east
from Jilin, the Korean population becomes totally dominant.
Directly north of the Korean border is a county-sized 'autono-
mous area', Yanbian, in which Korean is the language of local
government and of education through the university level. In
that area, bilingualism means acquiring MSC as a second lan-
guage.

5. Conclusions. In this sketch, I have tried to show that
Han bilingualism in China is intimately tied to the problem of
literacy and mastery of written Chinese; I have further tried
to show that there is a variety of school types, depending on
the region of China and the functions of languages in each
region. Regarding language and register use, I have sug-
gested that proximity at the time of speech to an activity re-
lated to the center of public life seems to be the dominant
factor in China. Only a brief sketch of one area of non-Han
bilingualism has been given, and in it I have tried to show
that domain is a functionally important tool.
Of greatest interest are not these analyses--which are very
superficial and which may be far from the mark--but rather
suggestions that they give for potential research. Systematic
studies of code-switching are lacking in China. Equally lack-
ing is a clear picture of what ranges of 'dialect' dominance
there are in individual competences. Also unknown are
attitudes regarding the relative value of MSC and local Han languages. Systematic studies of attainment during schooling years have not been done, nor have studies of attainment outside of school. In the non-Han areas, virtually all questions pertinent to bilingualism remain potential questions for research, since no work has been done on them.

I would like to end with a public plea to the Chinese government that such research be undertaken. With its size, ethnic and linguistic complexity, and its unique relationship of spoken to written languages, China is a singular laboratory for the study of bilingualism. From studying the uses of languages there, the rest of mankind stands to gain new understandings in how, when, where, and why we humans do or do not master more than one tongue. China's linguistic situation is a remarkably happy one. Her agenda for language reform is the most extensive that I know of, and her achievements since the mid-1950s have at least given a common tongue for some purposes to more people more rapidly than anywhere ever before. These achievements have been carried out with little conflict so that among the issues of particular importance to China today, conflict between language groups is almost nonexistent. Extending the policy on languages to its ultimate goal is, however, a matter of intense controversy. The replacement of Chinese characters by Pinyin is questioned by many, and it is clear that inadequate research has been done to determine what this radical switch to an alphabet will do to literacy and multilingualism in China. Less controversial only because fewer people are involved is the eventual switch to romanization from indigenous writing systems among minority peoples. Here again, little research has been done, especially regarding the principal assumption that ease of reading and ease of intercommunicative reading will be enhanced by the use of a romanization.

In short, it seems to me that both China and the rest of the world will benefit greatly if research into these questions can be undertaken and undertaken cooperatively.

APPENDIX

Characters used in Canton primary school 'experiment'

Single characters:

A | B
---|---
A.1 食 | shi 'eat'
sink  
A.2 佲 | men 'plural'
muhn  
B.1 + | shi 'ten'
sahp  
B.2 駟 | jiao 'call'
giu
<table>
<thead>
<tr>
<th>A</th>
<th>B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>A.3</strong> 您 'you (hon.)'</td>
<td><strong>B.3</strong> 书 'book'</td>
</tr>
<tr>
<td>納 'you (hon.)'</td>
<td>惜 'book'</td>
</tr>
<tr>
<td><strong>A.4</strong> 说 'say, speak'</td>
<td><strong>B.4</strong> 我 'I, me'</td>
</tr>
<tr>
<td>syut</td>
<td>惜 'I, me'</td>
</tr>
<tr>
<td><strong>A.5</strong> 是 'be'</td>
<td><strong>B.5</strong> 写 'write'</td>
</tr>
<tr>
<td>sīh</td>
<td>写 'write'</td>
</tr>
<tr>
<td><strong>A.6</strong> 不 'neg.'</td>
<td><strong>B.6</strong> 笔 'pen'</td>
</tr>
<tr>
<td>bù</td>
<td>笔 'pen'</td>
</tr>
<tr>
<td><strong>A.7</strong> 在 'be at, in, on'</td>
<td><strong>B.7</strong> 念 'study/recite'</td>
</tr>
<tr>
<td>zài 'be at, in, on'</td>
<td>念 'study/recite'</td>
</tr>
<tr>
<td>乔 (loc.) 'study/recite'</td>
<td></td>
</tr>
<tr>
<td><strong>A.8</strong> 她 'she, her'</td>
<td><strong>B.8</strong> 汉 'Chinese'</td>
</tr>
<tr>
<td>tā 'she, her'</td>
<td>汉 'Chinese'</td>
</tr>
<tr>
<td><strong>A.9</strong> 吃 'eat'</td>
<td><strong>B.9</strong> 课 'lesson'</td>
</tr>
<tr>
<td>chī 'eat'</td>
<td>课 'lesson'</td>
</tr>
<tr>
<td>白 'lesson'</td>
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</table>

**Two-character compounds:**

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<th>C</th>
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<tbody>
<tr>
<td><strong>C.1</strong> 走路 'walk'</td>
</tr>
<tr>
<td>zǒu lù 'walk'</td>
</tr>
<tr>
<td>路 lù 'walk'</td>
</tr>
<tr>
<td><strong>C.2</strong> 作文 'write a composition'</td>
</tr>
<tr>
<td>zuō wén 'write a composition'</td>
</tr>
<tr>
<td>写 wén 'write'</td>
</tr>
<tr>
<td><strong>C.3</strong> 名字 'name'</td>
</tr>
<tr>
<td>mǐng zì 'name'</td>
</tr>
<tr>
<td><strong>C.4</strong> 做事 'work'</td>
</tr>
<tr>
<td>zuō shì 'work'</td>
</tr>
<tr>
<td><strong>C.5</strong> 讲话 'talk'</td>
</tr>
<tr>
<td>jiāng huà 'talk'</td>
</tr>
<tr>
<td><strong>C.6</strong> 看书 'read'</td>
</tr>
<tr>
<td>kān shū 'read'</td>
</tr>
<tr>
<td><strong>C.7</strong> 很高 'very tall'</td>
</tr>
<tr>
<td>hěn gāo 'very tall'</td>
</tr>
<tr>
<td>高 gāo 'very tall'</td>
</tr>
<tr>
<td><strong>C.8</strong> 行街 'walk on the street'</td>
</tr>
<tr>
<td>xīng jiē 'walk on the street'</td>
</tr>
<tr>
<td>街 jiē 'street'</td>
</tr>
<tr>
<td>走 zǒu 'walk'</td>
</tr>
<tr>
<td>住 zhù 'live'</td>
</tr>
<tr>
<td>走 zhǒu 'walk'</td>
</tr>
</tbody>
</table>
Sentences:

1. 他们是什么人？
   Tā men shì shén mo rén
   Tā muhn sih sahm mo yāhn
   Keuíhdeih haih mātyēh yāhn?
2. 黄大林今天不到城外头去。
Huang Da Lin jin tian bu dao cheng wei tou qu
Wong Daai Lahm gam tin bat dou sinh ngoih tâu heui
Wong Daai Lahm gam jaht mhchóutsèhng.

3. 请你把那些杯子都拿走。
Qing ni ba nei xié bei zi dou na zou
Cheng nei hê bá na sé bui ji dou na jau
Mngói nei hê nêng de bui cheu theui.

4. 这张纸是他的吗?
Zhei zhang zhi shi ta de ma
Je jëung ji sih ta dik ma
Ngëng jë haih keuìhge ma?

5. 现在我学习英语。
Xian zai wo xuê xi ying yû
Yihn zhoih ngoih hohk jaap ying yû
Yínggâ ngoih hohk yingmûhn.

NOTES

1. This paper is based largely on observations made during three visits to the People's Republic of China. The visits included stays in nine cities (and surrounding countryside) in Eastern and Central China, and visits to two dozen educational institutions. This paper could be subtitled 'Hearing voices through jetlag', inspired by the Chinese saying, Zou ma kàn huă (roughly 'Viewing flowers from horseback', i.e. a quick, superficial visit). As I am not a bilingual specialist in any sense, I beg the indulgence of other participants for my obvious deficiencies.

2. After this paper was read, Professor Cheng Yumin of Fu Dan University (Columbia University 1979-80) suggested that characterizing the 'dialects' of China as languages is inaccurate. As a speaker of both MSC and Shanghai, he contends that the relation between those two tongues is derivational from a single underlying source. Examination of the example sentences given in the Appendix led him to suggest that a similar possibility of derivation exists between MSC and Cantonese. It is difficult to argue against such a contention (especially for someone who is not a native speaker!). Certainly, there must be some underlying grammatical base—as there is a historical common reference point in Middle Chinese for the phonology of many Chinese dialects. If there were not such a base, why would it be easier for Chinese speakers to
learn to speak another Chinese tongue than for them to learn to speak anything else? And why would it be easier for Chinese speakers to learn other Chinese tongues than for non-Chinese speakers to learn them? The alternative argument to calling these different 'languages' is that they are simply different dialects with rule-governed phonological correspondences and grammatical correspondences (with most sentences possible in one dialect being possible—albeit infrequent—in all dialects) and very noticeable lexical differences.

To me, the facts are not at issue, only the label. It is not very important whether one calls the Chinese Han tongues 'dialects' or 'languages' so long as one uses those terms in the same way with these forms of speech as with European tongues and American Indian tongues, etc. The Romance languages share the same level of commonality that the Chinese tongues do. We call them languages because there are distinct communities which speak those languages, because those communities identify themselves partly according to those languages and identify outsiders as nonspeakers of those languages, and because those who speak any of those languages as foreigners are quickly identified when they make an error. The same criteria (particularly the last) apply among the Chinese tongues. It is quite possible to communicate in Cantonized MSC or Mandarinized Cantonese. But variations that are too far from the commonly accepted standard are considered by native speakers to be wrong and are easily identified as such. This is especially true of nonstandard Cantonese. Since Cantonese is not the standard for the nation, true mastery of it by outsiders is very rare, and the speech community takes note of that fact in its self-definition.

In short, if we are to call the Romance tongues 'languages', then we should call the Han tongues 'languages' also. Or, if we call the Han tongues 'dialects', then we must refer to the languages of France, Spain, Italy, Romania, and Roman-speaking Switzerland as Roman 'dialects'.

NOTE

The author wishes to thank Mrs. Alice Tsao for the calligraphy which appears here.

REFERENCES


LEARNING STYLES AND TEACHING VOCABULARY

Josef Rohrer
Bundessprachenamt
Hürth, West Germany

My paper originally had a subtitle which does not appear in the printed program, perhaps because Dr. Alatis thought it was rather presumptuous--and I would agree with him. In the meantime, I have added another two. The first was 'Towards a common core in bilingual and cross-cultural language education', the second and third are 'Lexicology versus conceptology', and 'Alice versus Humpty Dumpty'. The latter subtitles suggested themselves to me on reading Riggs' (1979) article, 'A new paradigm for social science terminology', in which he coins the term 'conceptology' and rightly points out that Alice and Humpty Dumpty pose a dialectic that remains a hang-up to the present day.

I would like to reconsider the role of vocabulary learning and propose reasons for giving it priority over the acquisition of other language elements. First, our students' main concern when studying a foreign language may prima facie be 'grammar', owing to the seductive appeal that all nice systems, whether true or false, have to most people's minds. In actual fact, however, the two learning devices that many of our students can always be seen with are not grammar books, but two other devices: a thin copybook whose pages are divided by a red line so that on the left-hand side the foreign word may be entered, and on the right-hand side, the native language equivalent (or what is considered native language equivalent). The second device they can be seen with is a dictionary, an observation made before by Krashen (1979). This is not surprising because, after all, what the student sees when he sees a text is words and, depending on the language, certain morphological variations resulting from syntagmatic or paradigmatic substitution rules. What he never sees are the combinatorial rules, that is, syntax. Another seemingly trivial experience
is that students at the end of an intensive French course, for instance, may tell me that they have really learned a great deal, but that they still cannot express themselves properly, that they need more words. Note the 'express themselves'. The students had learned to express what others had thought up for them, they had become quite good at verbally reconstructing semantic givens. But they still cannot express themselves, something for which they would need their individual lexicons.

Second, I am by now firmly convinced that the words are not only the most important elements of a language (forgive the platitude), but also the first to be learned, in a conceptual way, I would like to add. One of the things that I think supports this view is that I can make myself understood if I spend about 50 hours learning 2,000 of the most frequent French words, for example, and use them by applying the combinatorial and substitutional rules of my native language, which is German. Last week, I made a little experiment and translated into French, applying my German grammar, a paragraph picked at random from a book in German by Luise Rinser (1977). I read the result to my French wife, and she understood it at once, without hesitation. Now, I am not advocating this as a teaching method. What I want to recommend, however, is giving vocabulary learning priority, both qualitatively and sequentially, and showing the learner--perhaps with the aid of such unaesthetic translations--how much French, English, etc. syntax, and, where applicable, accidence, he already has before he begins to learn these languages. I am still looking for noncontrastive textbooks. I have not even got a term for the concept 'noncontrastive'. Maybe someone can make a suggestion.

What I have said so far has been meant as an introduction to the subject proper of my paper, which is learning styles in teaching, learning, and acquiring vocabulary (I have to apologize for using 'learning' and 'acquiring' in this Humpty Dumpty fashion, or maybe I do not, because Humpty Dumpty was right, after all, wasn't he?).

I have chosen five learning styles which are--I have good reason to believe this--universal thinking behaviors: (1) conceptualization, (2) taxonomical thinking, (3) analogical reasoning, (4) free association, and (5) closure. I have chosen those five behaviors arbitrarily from among a larger list of cognitive behaviors in order to put a constraint on the elaboration of my theme. Stravinsky (1942:65) wrote in an article to which Earl Stevick drew my attention that the arbitrariness of the constraint serves only to obtain precision of execution, which is exactly what I hope to achieve. Let us, therefore, get down to precise brass tacks.
1. Conceptualization. I am using the term 'concept' in the classic sense: a feature or a set of features that several material or immaterial things have in common.

Thus I can pick from the inevitable, usually alphabetically ordered vocabulary list in any one textbook all the nouns, for example, and try to sort them in a way something like the following French examples, in order to elicit the adjectives rond, dur, chaud, etc., or questions like 'What's round in French?', 'What's hard in French?'.

(1) roue (2) acier (3) soleil (4) atome (5) explosion (6) plume (7) essence (8) avion

assiette pierre four moucheron tonnerre ouate argent télégramme

anneau dent flamme goutte moto poussière or fusée

Of course, the student may first ask 'What's roue?', 'What's assiette?', 'What's anneau?'. Obviously, I can also use groups of verbs and adjectives to elicit the conceptual features they have in common, just as I can have the conceptual features themselves expressed by means of different word classes. When the intention is to teach recognition vocabulary, it might be as well to present the terms for the conceptual features in random order or in multiple choice groups with three or four distractors. I recommend this type of exercise because the learner has to decode, for example, terms like the following in order to encode the concepts.

escalier en colimaçon pas de vis tire-bouchon

applaudissement ordre nécrologie

He arrives at, or is given, the signifiers spirale and louange after understanding the signified spirale and louange. He has understood before he learns to name or express what he has understood.

When we try to construct vocabulary exercises of this kind by exploiting the word lists contained in textbooks, however, we can easily be let down. In one of several experiments, I extracted all the adjectives and tried to find those nouns in the list that could match them conceptually. I was never very lucky. In a typical case, I found 27 adjectives for only 10 of which the textbook offered matchable nouns. Out of this 10, only 4 could be matched with groups of nouns suitable for exercises of the type I have described.
If I do not want to feed in additional vocabulary, I have to throw out a different net to catch some of the others, which leads me to the next thinking behavior that I can exploit in vocabulary learning.

2. Taxonomical thinking. The term 'taxonomical thinking' refers to the establishment of relations between abstractions, structures, and sequences.

By 'abstraction' I mean classification by means of super-ordination, subordination, and coordination. It might also be called the old game of Animal, Vegetable, or Mineral. For an excellent theoretical discussion of classification as well as other kinds of taxonomy, I would refer you to the very lucid and concise study in Normenausschuss Terminologie (1979). There is obviously an immense amount of material and immaterial things that we can classify. Two examples, the first of which was inspired by Flesch (1973), may suffice here.

Things whose value

<table>
<thead>
<tr>
<th>Often increases with age</th>
<th>Has nothing to do with age</th>
<th>Often decreases with age</th>
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<td></td>
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<tr>
<td>Des choses qui</td>
<td></td>
<td></td>
</tr>
<tr>
<td>sentent bon</td>
<td>ne sentent pas</td>
<td>sentent mauvais</td>
</tr>
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<td></td>
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</tbody>
</table>

Vocabulary exercises that require taxonomical thinking in terms of abstractions (classifications) are most effectively constructed by combining subordination (i.e. a descending hierarchy of generic terms (chose), classifier (sentent bon), and specimen (rose)), and coordination (nonhierarchical relationship between specimens). One can do these exercises in basically three ways, with or without the aid of choice lists: (1) by giving the classifiers and specimens and having the learner find the generic concept and term (Obst); (2) by giving the generic term and the specimens and having the learner find the classifying concepts and terms (Kernobst and Beerenobst); (3) by giving the generic term and the classifiers and having the learner find the concepts and terms of specimens (Äpfel, Birnen ... Himbeeren, Brombeeren ...).

Different kinds of graphs can be used for classificational and other taxonomical exercises. They should be given close
attention because they may assist imagery which, in many learners, is an important retention factor. A comprehensive overview of graph design is given in Schmidt (1975). Rohrer (1978) shows applications of such techniques to foreign language learning.

Two other types of concept play an important role in taxonomical thinking and may be exploited in the making of effective vocabulary exercises. They are structuring and sequencing. Within the scope of this paper, I can give only a few examples.

**Structures:**

- lunettes
- monture
- verres

- Baum
- Stamm
- Äste
- Zweige
- Wurzeln

- egg
- shell
- white
- yolk

**Sequences:**

- téléphoner
- composer
- parler
- raccrocher

- Kartenspielen
- Mischen
- Abheben
- Austeilen
- Spielen

- farming
- ploughing
- fertilizing
- sowing
- harvesting

In structuring and sequencing exercises, our memory's awe-inspiring ability to distinguish between the significant and the insignificant or, in other words, to sort concepts on the appropriate levels of importance, comes very much into play. It is a gratifying experience when in an exercise like the following, at least nine out of 10 learners unhesitatingly supply *engine* as the missing structure element.

- motor-car
- body
- chassis
- ?
- wheels

The tenth learner, who may have inserted *gear-box*, can be easily convinced that he has hit the wrong level.

Note also that by means of such exercises one can pretty well control the input of recall vocabulary on the one hand...
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and recognition vocabulary on the other. The recognition vocabulary consists of the terms that have to be decoded (e.g. the essential parts of a motor-car) in order to arrive at the concept whose term may be intended to be a recall item (e.g. motor-car).

3. Analogical reasoning. Another thinking behavior we can make very extensive use of in teaching the vocabulary of a foreign language is analogical reasoning, that is, extracting a relationship that exists between one set of features, material or immaterial objects, and constructing an equivalent relationship that matches a different set. For an exhaustive discussion of the issues involved in verbal analogical reasoning see Sternberg (1977). Its possible applications to foreign language teaching are dealt with in Rohrer (1978).

In North America, everyone is familiar with verbal analogies because they are extensively used in the SAT and other tests. In my part of the world, we are much less familiar with them. We can do them all the same, and so can people from Korea or Haiti, because analogical reasoning is a cognitive universal.

There are many reasons why verbal analogies lend themselves beautifully to the construction of vocabulary exercises. The most important reason, in my opinion, is that, just as in the case of taxonomical exercises, the learner must decode terms and encode concepts:

\[
\text{mouth : palate :: room : ?}
\]

The learner must have understood the relationship between mouth and palate on the one hand, and mouth and room on the other, before he can form the concept ceiling and produce or ask for the term ceiling. Also, because of this process and the additional circumstance that words in such closely knit analogies are used unequivocally in insightful contexts, the retentive effect can hardly be overrated. In using verbal analogies, one can simply stay on the word level. One can equally well go right up to the discourse level by discussing an analogy (Figure 1).

Thus I can ask, Was ist das Verhältnis zwischen Insel und Meer?, and I can elicit the verb sich befinden. The student writes it in the appropriate box. Was ist das Verhältnis zwischen Insel und Oase? The answer is Sie ähneln sich, which means that the verb sich ähneln is to be entered in the box on the node Insel : Oase, etc.

I have so far been able to construct something like 4,000 analogies of this kind, which strengthens my suspicion that, with very few exceptions, all concepts and their corresponding terms can be tied down in verbal analogies, given time and imagination. I hope to be able to publish such analogy exercises along with other kinds of vocabulary exercises in what I am tempted to call 'The intelligent learner's dictionary
of English (German, Spanish, etc.)', if I can find a publisher who has enough courage to use the word intelligence in connection with language learning.

Figure 1.

![Figure 1](image-url)

4. Free association. A free association vocabulary exercise can best be done in small groups. The learners have an empty diagram like Figure 2.

Figure 2.

![Figure 2](image-url)

The first word that anyone in the group shouts, preferably a noun, is the key word to be entered in the top box. Another member of the group is then asked to name, very quickly, three concepts triggered off by the key word. Anything goes. The concepts may be named in the learner's mother tongue or in the target language. In the former case, the teacher supplies a target language equivalent. The
exercise can become very lively, if the group members have had the technique of divergent thinking explained to them.

In a few minutes the graph has been completed with nouns supplied by the students. The whole thing may stop there, if one wants to stay strictly on the word level. It may, of course, go on if the group wants to talk about the graph because they are curious to learn why someone thought he came up with camera, pig, and interest in connection with bank. In the attempted explanation certain verbs like watch, think of, and yield may be elicited. These verbs are written on the connecting lines of the graph. In my experience, free association exercises of this kind have many uses in foreign language learning. They are so numerous that they would merit elaboration in a further paper. The most important aspect of the exercise is that the learners have participated in producing a topic for discussion, a factor contributing to good retention.

5. Closure. To conclude, I would like briefly to mention closure. In my experience, this is another highly effective vocabulary learning technique. Its particular merit could be that one can make use of very meaningful texts in the form of wise and witty quotations, for example. A quotation like Agatha Christie's Un archéologue est le meilleur __ qu'une femme puisse avoir: plus elle vieillit, plus il ___ à elle (my own translation into French) appeals to the most important trait of our memory. It prefers the meaningful to the redundant, the significant to the trivial.

I said in my introductory remarks that I had good reason to believe that the thinking behaviors dealt with in this paper were cognitive universals. Although, for a number of technical reasons, I cannot conduct scientifically conclusive experiments in this field, I tried to satisfy myself all the same that my contention is not a priori unfounded. Therefore, while I was preparing this paper, I undertook a little experiment with 16 subjects from six different non-European cultures. They had been in Europe for only a few weeks and had apparently never been confronted with the kinds of tasks that I used in the experiment. The subjects had to solve 304 tasks of concept formation, taxonomical thinking, and analogical reasoning. The average percentage of wrong solutions was 8.5 percent, a figure consistent with the average rate of error that, for example, a group of German subjects produces. Vocabulary exercises that demand the kinds of thinking behaviors I have described here do not seem to pose cross-cultural difficulties.

Although this presentation is restricted to a discussion of mainly cognitive learning styles, I am quite aware of and would like to stress the at least equally important affective dimensions inherent in any learning experience. In the past few years, we have learned a great deal about how to make and use affective foreign language learning materials, not least in the field
of vocabulary learning. For an example that is representative of many other excellent studies, I would like to draw your attention to Moskowitz (1978). However, there does not seem to be sufficient evidence to claim the cross-cultural applicability of affective universals to the learning of foreign languages.

In order to put this presentation in the perspective in which I would like to see it, allow me to quote from Goethe, in a translation by Flesch (1973): 'It is always better to say right out what you think without trying to prove anything much: for all our proofs are only variations of our opinions, and the contrary-minded listen neither to the one nor the other.'

NOTE

I would like to thank Frank Gregory, Federal Language Bureau, for his assistance in the preparation of the final version of this manuscript, as well as Ernst-Ulrich Klein, of the same agency, for conducting the experiment described in the paper.

REFERENCES

It is a great honor to be invited to participate in the 31st Georgetown University Round Table on Languages and Linguistics. There is also a warm feeling of coming home, because exactly 10 years ago I left Georgetown University, where I had been a University Fellow for three years, and began my teaching and research career in Japanese language and linguistics at the University of Hawaii at Hilo. Whatever I may be able to provide today in my present paper is based to great extent on my teaching and research experiences during these years.

As an applied linguist, and as a language teacher, I should like to address myself directly in this paper to the statement by Shuy (1978:596) that language classroom instruction has focused too extensively on language form alone, and that insufficient attention has been given to developing competence in language use. Shuy points out (1978:596) that if the foreign language learner cannot actually use the language to clarify, promise, assert, request, command, refuse, get invited and interrupt, and to open, continue and close conversation, the learner will be seriously limited and handicapped.

Cahir and Kovac (1979) address themselves to this same issue and state:

Successful use of language does not depend solely on what might be considered correct structural usage, i.e. putting together 'grammatical' sentences. It is useful to view language as a tool that helps speakers get things done, and if this view is taken, it follows that successful use of language means accomplishing the task the
speaker sets out to accomplish, e.g. making a request, getting permission, apologizing, soliciting praise, giving directions. If a speaker's competence is to be judged, it must certainly include some account of whether or not he or she is able to achieve his or her goal.

I should like to mention that I agree fully with these statements by Shuy, and by Cahir and Kovac. The real problem in producing effective bilinguals, as I see it, is how to achieve the communicative competence in actual language use to which these authors refer, a goal which we as language teachers can heartily endorse.

This paper, therefore, addresses itself directly to the question of how to achieve this competence in language use while at the same time not ignoring competence in language form. For I should like to make it clear that I see no necessary conflict or separation between these two—that is, between competence in language use and competence in language form. Both are crucial, certainly. One cannot develop a genuine effectiveness in language use without careful attention as well to language form.

What I am going to suggest here, accordingly, is a pattern of language instruction that incorporates language form within actual language use.

I call this the 'socio-semantic approach' to language instruction—'socio' in the sense that it focuses upon the social situations of everyday life, 'semantic' in the sense that it focuses upon the communication of meanings that are relevant to these social situations.

How then, let us ask, may we apply this socio-semantic approach to language instruction in our actual classroom teaching? For I have found that much of our classroom teaching, without meaning to, sets up artificial, unreal patterns of language response by the learner.

By this I mean that the learner often learns through classroom drills a variety of language forms that are literally out of place within the actual socio-semantic contexts of everyday life. A classic example of this is the sentence I wish I were a bird! that I learned conscientiously as a student of English in Japan. (To this day I have never had the opportunity to use this sentence.) As a result of such training, the learner generally cannot use within actual, real-life situations these 'classroom' language responses that he has learned. He is restricted. He is embarrassed. He is frustrated.

Let me illustrate this. Imagine that it is breakfast time at a hotel in Hawaii and a group of Japanese tourists has just been seated at a table. A waitress comes over to them and begins taking their orders. One person in the group is being depended upon to do this difficult job of handling the situation in English and he takes over. He is ordering for everyone in
the group. Everything goes well. Each person in the group is watching him with admiration and respect.

Suddenly, the waitress misses what he has just said. And she asks quite innocently, 'Excuse me, what was it you said?'

This is the truth of the matter. The waitress literally did not hear him. But the tourist interprets this honest request to repeat what he has just said as a message that his English was somehow not good enough to be understood by the waitress.

Here we have a kind of linguistic 'moment of truth'. The Japanese tourist's ego dwindles to zero and he can no longer function well in English. He has lost face in front of these people who depend upon him totally.

With this situation and comparable ones in mind, therefore, let us ask now what are some of the major inadequacies of 'classroom language' which handicap our students in their learning to use language effectively?

I am going to concentrate here on two of these: (1) the particular drills which we use in our classroom teaching, and (2) the teaching of grammar as grammar; and I will relate to them the socio-semantic approach that I have suggested. Because much of my teaching and research experience is in TESOL and in the teaching of second languages in general, as well as in the teaching of Japanese language, my illustrations will be in English although the principles I will discuss are of broad application to bilingual education as a whole.

Let me begin with classroom drills. I have found two types of frequently used classroom drills—substitution drill and transformation drill—to be overrated as effective teaching instruments. They produce, often, a kind of artificial response by the student that is seldom applicable in real-life language situations. For example, the typical format of the substitution drill ('This is a pen', 'This is a fork', etc.) and the typical format of the transformational drill ('They use chopsticks', 'They don't use chopsticks', etc.) are artificial constructs of classroom language that are rarely of any real use to the student when he is called upon to respond within actual contexts of everyday life.

Let me make clear that I am not seeking to discredit these drills in an across-the-board way. They have certain distinct uses in their own right, and I do not wish to underestimate these. The point that I should like to stress is that the often artificial nature of these drills makes it difficult for the language learner to apply directly in his actual language use the specific responses they have taught him.

What kinds of drills, then, are most likely to give the language learner something that he can use in real life? I am going to concentrate here on certain kinds of production drills, specifically, that I have developed so as to incorporate socio-semantic situations of real life more fully into classroom teaching.
The 'What did you say?' Drill. The first of these is a specific kind of repetition drill that I call the 'What did you say?' Drill, and its variations 'What?', 'What was it you said?', etc.

This drill is designed to deal directly with the discomfiture of language learners—as in the case of the Japanese tourist that I mentioned—when they are called upon in actual language situations to repeat what it is they have just said.

The 'What did you say?' Drill builds confidence. While it is functionally similar to the 'Say it again' format and the 'Repeat it' format in that it trains the student to repeat what he has said, I have found it to be superior to these in its capacity to alleviate anxiety and fear. Most importantly, the learner will be able to use the language response that he has learned through this drill in a broad variety of real-life situations—in a restaurant, at a ticket counter, when asking directions, and many more.

The Information-Seeking Drill. The second type of drill that I have found helpful in training the language learner to use language effectively in the real-life situations he will face involves the initiation of linguistic encounter.

I call it the Information-Seeking Drill. Like the 'What did you say?' Drill, it builds confidence in one's capacity for language production that is so essential in becoming an effective bilingual.

Let me illustrate its use. In this drill, the student is provided with a common situation of everyday life as follows:

You need to make a long-distance telephone call to Boston and you're talking with the operator to find out what the long-distance rates are for varying lengths of time and for different hours of the day. What kinds of questions will you ask?

Student responses to this Information-Seeking Drill will vary. Some will ask 'What does it cost to call Boston?' 'Are there special rates for different hours?', and the like.

The particular questions which the students ask, so long as these are more or less relevant to the specific socio-semantic context, are not in themselves crucial. The important training mechanism which the drill provides is that you as a language teacher are positioning your students within a real-life situation, and you are asking them to inquire meaningfully about it. You are asking them also to take an active role in initiating conversation rather than be simply passive responders.

Such training is rare in classroom learning situations. Yet it is precisely such training that our students will need to have if they are to become effective bilinguals, knowing how to 'open, continue, and close conversation'—skills of practical
language use which Roger Shuy, as I have mentioned, has correctly labeled as essential.

The Helpful-Comment Drill. A third type of drill trains the student to respond appropriately within another frequently encountered socio-semantic context of everyday life: someone has a problem. I call this the Helpful-Comment Drill.

In utilizing this drill, the classroom teacher provides a common problem situation of real life to which the student is asked to respond along lines that are culturally appropriate. The teacher's instructions, accordingly, would be as follows: 'A friend of yours tells you that he has a bad headache. How do you respond?'

As in the Information-Seeking Drill, student responses are likely to vary. Some may suggest, 'Why don't you take an aspirin?'; others, 'You probably need some rest', and so on.

Again, the important consideration is not the specific Helpful Comment which the drill evokes, so long as the latter remains within culturally relevant and acceptable bounds. The drill's real utility, I have found, is that it places the language learner directly in an actual socio-semantic context of everyday life and trains him to respond appropriately within it.

The repatterning of grammar. I should like to address now what I consider to be a feature of classroom teaching that seems often to weaken our students' interest and to handicap their effective language use.

The problem to which I refer is the teaching of language form in its traditional categories of grammar. I have found that my language students tend to develop (if they have not already developed) what I call a 'grammar allergy' whenever grammar is taught in its classical form. They fidget through the analysis of regular versus irregular verbs, they yawn through the present perfect, and they practically snore through the subjunctive.

Unfortunately, most of our language textbooks are organized directly around these traditional categories of grammar. But I have found that there is something the resourceful language teacher utilizing the socio-semantic approach can do, and that is to repattern these traditional categories of grammar, converting them for the students into frameworks of actual language use. Language form most certainly is still taught, but it is taught within these frameworks of socio-semantic relevance.

What exactly are these socio-semantic patterns of everyday language usage that I am suggesting here? I shall have time to note only a few.

One of these I call the 'regret' pattern—for example, 'I should have studied harder for that exam' and 'I should not have loaned my sports car to someone who drives like that'.
Another I call the 'bragging' pattern: 'I have been to Europe twice' and 'I have made the Dean's List'.

And let me not omit the 'gossip' pattern: 'Did you hear about Mary's accident?' and 'Have you heard that Bill and Jane split?'

I point out to my students of Japanese language that when they master these forms and their variations, they will be able to brag, to express regret, and to gossip in Japanese. Comparable forms of repatterned grammar that I have been using to express the realities of socio-semantic life are designed to teach the student to 'request, clarify, promise, assert, command, refuse and interrupt', and to develop competence in such real-life situations as 'getting permission, apologizing, soliciting praise, [and] giving directions'—patterns of language use which Roger Shuy, and Cahir and Kovac, respectively, consider to be central.

To conclude, I have sought in the present paper to describe certain of the techniques that I have found to be useful in producing effective bilinguals. I hope they may be helpful to others.

REFERENCES


POSITIVE EFFECTS OF BILINGUALISM ON SCIENCE PROBLEM-SOLVING ABILITIES

Carolyn Kessler
University of Texas at San Antonio

Mary Ellen Quinn
Edgewood School District, San Antonio

Introduction. The effect of bilingualism on the individual is a research issue with a long history of contradictory findings. The issue of whether the bilingual is cognitively different from the monolingual has generated many studies in this century from those of Ronjat (1913) and Leopold (1949) to those of the present. Early works, particularly before the 1960s, tend to report the poor academic achievement of bilingual children and to argue that bilingualism itself leads to mental confusion and language handicaps. (For a review of the literature, see Darcy 1953, 1963.) More recently, however, a substantial number of studies suggests that bilingualism can accelerate aspects of cognitive growth. These studies cite advantages for bilingual children on a variety of measures of cognitive functioning.

It is the purpose of this paper to examine some of the effects of bilingualism on sixth-grade children's ability to formulate scientific hypotheses or solutions to science problems and to observe the interaction of this ability with linguistic competence by comparing the bilingual children's performance with that of a group of monolinguals of the same age and grade level. The problems are designed to set up discrepant events which trigger the divergent thinking manifested in the generation of scientific hypotheses. Linguistic competence is examined through the syntactic complexity of the language used to express these hypotheses.

That bilingual children have a cognitive flexibility and a more diversified set of mental abilities than monolinguals is a conclusion reached in the benchmark study conducted by Peal and Lambert (1962) working with matched monolingual and bilingual
groups. Their results, indicating that bilingualism may favorably affect the structure and flexibility of thought, have since found further confirmation from many parts of the world: Switzerland (Balkan 1970); Singapore (Torrance, Gowan, Wu, and Aliotti 1970); South Africa (Ianco-Worrall 1972); Israel and New York (Ben-Zeev 1972, 1977); Western Canada (Cummins and Gulutsan 1974); France, Germany, Canadians living overseas (Bain and Yu 1978); the United States (De Avila and Duncan 1979), among others. All of these studies indicate that bilingual children, relative to monolingual controls, show advantages on measures of cognitive flexibility, creativity, or divergent thinking.

Of particular relevance to the study reported in this paper is the work of Scott (1973) with French–English bilingual children in Montreal. Scott studied the effects of bilingualism on children's divergent thinking, an indicator of cognitive flexibility. Assessment measures of divergent thinking provide the subjects with a starting-point for thought and then ask them to generate a whole series of permissible solutions to various kinds of problems. Scott's results show that children who had become functionally bilingual through an immersion program for bilingual schooling scored substantially higher than the monolingual controls equated for IQ and socioeconomic level. Cummins and Gulutsan (1974), testing sixth grade bilingual and monolingual children on a task in which the subjects within a given time limit were to give as many uses as possible for an object named by the experimenter, found that bilinguals responded with greater diversity or originality, indicators of divergent thinking. These studies seem to indicate a causal link between bilingualism and divergent thinking, thus supporting the conclusion of cognitive advantage for bilingual children.

Lambert (1977) has suggested that the consequences of bilingualism may depend upon the dominance of the bilingual's two languages. He proposes the notions of subtractive and additive bilingualism. Subtractive bilingualism refers to situations in which the learning of the second language is at the expense of the first language. Additive bilingualism, on the other hand, occurs in situations where the learning of a second language takes place without loss to the first language. Cummins (1976, 1979) has pointed out that some of the positive effects of bilingualism may depend on the degree of bilingualism attained. He has argued that there may be threshold levels of linguistic competence that bilingual children must reach in order to experience the potentially positive effects of bilingualism on cognitive functioning. This hypothesis assumes that those aspects of bilingualism which exert positive influences on cognitive functioning are unlikely to come into effect until the child has attained a certain minimum or threshold level of competence in two languages. He further makes the claim that there may be two threshold levels, a lower one sufficient to avoid any negative cognitive effects and a higher one which
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might be necessary for accelerated cognitive growth. For Cummins (1978) linguistic competence refers to the ability to make effective use of the cognitive functions of language. More specifically, it is to use language effectively as an instrument of thought and to represent the thinking processes by means of language. Cummins (1979), in suggesting a developmental interdependence hypothesis, argues that the development of second language competence is a function of the level of the child's first language competence already attained at the time when intensive exposure to the second language begins. In support of this hypothesis, Skutnabb-Kangas and Toukomaa (1976) report that in school subjects such as science, which requires an abstract mode of thought, children educated in a second language with a good level of development of their first language succeed significantly better than children who do not have adequate development of the first language.

One explanation of the hypothesis that bilingualism can influence the development of cognition is found in the theory of cognitive development presented by Piaget (1970). Although Piaget has not specifically addressed the issue of bilingualism, his position on cognitive development and its relationship to language development has implications for an understanding of the effects of bilingualism. And even though Piaget takes a conservative position on the developmental relationship between language and thought, that position does not seem to constitute a denial that bilingualism represents an enriched form of experience capable of influencing cognitive functioning positively. In Piaget's theory discrepant events, such as those presented in science problems, play a central role in setting up the type of internal conflict necessary for intellectual development. Through the equilibration processes of assimilation and accommodation, underlying structures, or schemas, continue to be built up and modified. As Piaget (1952) explains, assimilation is the incorporation of new elements of experience into an internal system, while accommodation refers to modifications of the same system as a result of one or more assimilations. Language learning also involves accommodating activity. Therefore, as Ben-Zeev (1972) points out, bilingualism presents an additional element of conflict within the linguistic environment since the child must adapt to two languages. Furthermore, in learning to manipulate language structures, the child may develop a general cognitive skill useful in other domains. According to Ben-Zeev, the cognitive conflict that triggers accommodation and the cognitive structures necessary for assimilation of new information are enhanced in the bilingual child. Cognitive development itself can then be enhanced for the bilingual.

It is possible, too, that relevant aspects of problem situations may be brought to the bilingual child's attention by the availability of two linguistic codes. This is a basic tenet of the objectification hypothesis drawn from the work of Georgian
psychologists in the Soviet Union. Cummins (1976) explains the process of objectification as a process whereby objects become the focus of conscious attention, a process closely linked to language. For example, in science problem-solving situations it may be that certain relevant aspects of the problem situations, or discrepant events, may be brought to the bilingual child's attention by the availability of two different linguistic perspectives. This, then, might predict higher performance levels by bilingual children in science problem-solving situations.

The framework for investigating the ability of children to form hypotheses is set forth in a study by Quinn (1971) and Quinn and George (1975), which evaluated a method for teaching hypothesis formation to monolingual sixth-grade children in two different socioeconomic settings. Under the conditions described in that study, Quinn concluded that hypothesis formation can be taught, that the quality of the hypotheses elicited can be measured, and that there is a significant difference (p < .001) between the quality of hypotheses generated by students who received instruction in formulating scientific hypotheses and those who did not. Findings from four groups of sixth-grade children in Philadelphia, Pennsylvania—a control and an experimental group from an upper-middle-class suburban socioeconomic level, and a control and an experimental group from a lower working-class urban socioeconomic level—indicated that the cognitive ability to formulate scientific hypotheses functions independently of socioeconomic level. In a subsequent study with the same population, Kessler and Quinn (1977) found a significant correlation (p < .001) between the results of direct instruction in hypothesis formation and written language complexity for both the upper and lower socioeconomic groups.

With socioeconomic level identified as a nonsignificant variable in ability to generate increasingly complex scientific hypotheses, Kessler and Quinn (1979) conducted a pilot study comparing the effects of nonbalanced bilingualism and monolingualism on the ability to formulate scientific hypotheses and the ability to write increasingly more complex expressions of those hypotheses. Holding SES, experimental treatment, and teacher constant, results obtained from 28 sixth-graders indicated that the ability to generate hypotheses favors bilinguals, even when bilingualism is subtractive. The sample included a group of 14 English-speaking monolinguals and 14 Italian-English bilinguals in the process of replacing their first language, Italian, with English. Both groups were matched on IQ scores as measured by the Otis Quick-Scoring Mental Ability Test, Beta, Form FM. The mean scores for hypothesis quality and syntactic complexity were significantly higher for the subtractive bilinguals.

In light of the positive effects of bilingualism observed in the pilot study, we hypothesize in the present study that additive
bilinguals taught how to approach the discrepant situations presented in science problems will experience greater gains in their hypothesis quality and linguistic complexity scores than their monolingual peers. Additive bilingualism is here operationally defined as the ability to use two languages successfully in school experiences, a characteristic of children who have experienced bilingual schooling for at least four years (K-3). During this period the first language continues to develop while the second language is added. The result is that children who acquire English as a second language in bilingual programs, which provide for continued development of the first language, meet more closely Cummins' conditions of the threshold hypothesis and developmental interdependence hypothesis than second language learners who have not experienced bilingual education.

Subjects. Subjects for this investigation were sixth-grade students in four intact classrooms, two monolingual English-speaking and two Spanish-English bilingual groups.

One control and one experimental group of monolingual children, 32 in each group, were from intact classes in the same school located in an upper-middle class suburban area of Philadelphia. In addition to SES, age and grade level, the two groups were matched on the following variables: (1) IQ as measured by the Otis Quick-Scoring Mental Ability Test, Beta, Form FM; (2) reading scores as measured by Part III of the Pupil Progress Series, Diagnostic Reading Test; (3) overall grade-point averages.

The bilingual groups were from a Mexican-American neighborhood in San Antonio, Texas. One control and one experimental group of 30 students were from intact classes in the same school in a very low socioeconomic area where Spanish functions as the language of the home and the community. Language proficiency tests designed by the school district and administered at entry to kindergarten had identified the students as Spanish dominant, with little or no proficiency in English. As a result, they were placed in bilingual education programs for grades K-3. By grade 6 all instruction was in English, the second language, but Spanish continued to function in peer interactions, in the home and community. Because of the bilingual program in which they had participated, the children were literate in both Spanish and English. The control and treatment groups were matched on mathematics scores, science scores, and reading scores, all as measured by the Comprehensive Test of Basic Skills, Level 2, Form S.

Methodology. The treatment given the experimental monolingual and bilingual groups consisted of 12 science inquiry film sessions and six discussion sessions, each session 40 minutes in length, with all sessions for all groups taught by the same teacher in English. Each film session, based on a
3-minute film loop depicting a single physical science problem, ended with the students writing as many hypotheses as possible in a rigorously controlled 12-minute period. The individual papers were then scored on two criteria: Quinn's Hypothesis Quality Scale (1971) and the Syntactic Complexity Formula developed by Botel, Dawkins, and Granowsky (1973).

An hypothesis is here defined as a testable explanation of an empirical relationship between at least two variables in a given problem situation. The Hypothesis Quality Scale given in Table 1 assigns a numerical value ranging from 0 to 5 for each hypothesis given, with 5 the highest score, awarded for an explicit statement of a test of an hypothesis and 0, the score for no explanation of the problem presented.

Table 1. Hypothesis Quality Scale.

<table>
<thead>
<tr>
<th>Score</th>
<th>Criterion</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>No explanation, such as a nonsense statement, a question, an observation, a single inference about a single concrete object.</td>
</tr>
<tr>
<td>1</td>
<td>Nonscientific explanation, such as '... because it's magic' or '... because the man pushed a button'.</td>
</tr>
<tr>
<td>2</td>
<td>Partial scientific explanation, such as incomplete reference to variables, a negative explanation, an analogy.</td>
</tr>
<tr>
<td>3</td>
<td>Scientific explanation relating at least two variables in general or nonscientific terms.</td>
</tr>
<tr>
<td>4</td>
<td>Precise scientific explanation, a qualification and/or quantification of the variables.</td>
</tr>
<tr>
<td>5</td>
<td>Explicit statement of a test of an hypothesis. (An inference is made here that the child who states a test is also able to hypothesize adequately and precisely.</td>
</tr>
</tbody>
</table>

To determine the reliability of the Hypothesis Quality Scale, a set of 50 hypotheses taken from those written by the sixth-grade children in the study were given to three science educators who assigned scores using Quinn's scale. The Nash-Beyers computer program for interjudge reliability, based on Winer (1962), gave an unadjusted coefficient of 0.94, thus establishing the reliability of the scale.

In discussion sessions following each set of two film sessions, the Hypothesis Quality Scale was used to show the children how to judge their own hypotheses and how to make use of their observations and inferences to generate hypotheses of higher quality. Children in experimental groups learned to distinguish
between a 0-value hypothesis such as 'Magic did it' and a 5-value one such as 'I could test my idea by putting several little bottles with different amounts of water in them in a tub and then see which ones would sink'.

The Botel, Dawkins, and Granowsky measure of syntactic complexity was selected from among others because of the theoretical basis on which it was developed and because of the ease with which it can be used by the nonlinguist. Derived from transformational-generative grammar theory, it takes into account language development and performance studies which consider the frequency of usage of structures in children's oral and written language as well as experimental data on children's processing of syntactic structures. Syntactic structures are assigned weighted scores ranging from 0 to 3. A 0-count structure is given, for example, to simple sentence structures as 'I hit the ball' and a 3-count structure to clauses used as subjects such as 'What it might do is fall down'. One significant feature of the formula is that syntactic complexity is a function of specific structures rather than sentence length.

To determine the reliability of the Syntactic Complexity Formula the same set of 50 hypotheses used in determining the interjudge reliability of the Hypothesis Quality Scale was given to four language educators for scoring. The Nash-Beyers computer program for interjudge reliability gave an unadjusted coefficient of 0.98.

At the end of the 18 sessions comprising the treatment for the experimental monolingual and bilingual groups, three additional film sessions were presented to elicit hypotheses that were scored for hypothesis quality. This written data was also scored for syntactic complexity. Scores for hypothesis quality and syntactic complexity constitute the criterion variables for the present study. The same three films were presented to the control groups, both monolingual and bilingual, to elicit hypotheses scored for the criterion variables for those groups.

Standardized reading tests were also administered to all four groups in order to have a measure against which correlations for hypothesis quality and syntactic complexity could be compared.

Results. Table 2 summarizes the mean scores attained by the control and experimental monolingual groups on hypothesis quality, syntactic complexity of the written hypotheses, and reading scores on a standardized test.

Closely matched for IQ, reading ability, and grade-point average, the control and experimental groups of the upper socioeconomic monolingual children demonstrate marked differences in their mean scores for hypothesis quality and written language complexity. The group given instruction in science problem-solving situations scored consistently higher than the
control group in the quality of their hypotheses and the com-
plexity of the written language used to express them.

Table 2. Means for monolingual groups.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control group (N=32)</th>
<th>Experimental group (N=32)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis quality</td>
<td>25.4</td>
<td>53.3</td>
</tr>
<tr>
<td>Syntactic complexity</td>
<td>52.6</td>
<td>130.0</td>
</tr>
<tr>
<td>Reading level</td>
<td>6.7</td>
<td>7.0</td>
</tr>
</tbody>
</table>

Table 3 summarizes mean scores for the bilingual control and experimental groups which were closely matched on standardized tests for mathematics, science, and reading.

Table 3. Means for bilingual groups.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Control group (N=30)</th>
<th>Experimental group (N=30)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis quality</td>
<td>29.5</td>
<td>176.0</td>
</tr>
<tr>
<td>Syntactic complexity</td>
<td>39.6</td>
<td>181.8</td>
</tr>
<tr>
<td>Reading level</td>
<td>3.4</td>
<td>3.8</td>
</tr>
</tbody>
</table>

The control and experimental groups of the very low socio-economic bilingual children also demonstrate marked differences in the two variables studied. The bilingual group given instruction in formulating scientific hypotheses scored markedly higher than the control group. Higher scores on language complexity resulted as a by-product of the science instruction.

Figure 1 compares control and treatment groups for monolingual and bilingual children on hypothesis quality scores.

The control bilingual group is slightly above the monolingual control. Both experimental groups show significant gains (p < .001) resulting from lessons in formulating scientific hypotheses. Of the two, however, the gain for the bilingual group is far greater than that for the monolinguals.

Figure 2 similarly compares the four groups, monolingual and bilingual control and experimental groups, on syntactic complexity scores.

Scores for written language complexity are slightly higher for the control monolingual group than for the bilinguals. Both experimental groups show significant gains (p < .001) in the complexity of the written language used to express their hypotheses, but of the two, the bilingual group scores higher.

To examine the interactions between hypothesis quality scores, language complexity, and reading grade equivalents, Table 4 gives Pearson product moment correlation coefficients for the control monolingual and bilingual groups.
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Figure 1. Comparison of hypothesis quality scores for monolingual and bilingual groups.

![Bar chart showing comparison of hypothesis quality scores for monolingual and bilingual groups.](image1)

Figure 2. Comparison of syntactic complexity scores for monolingual and bilingual groups.

![Bar chart showing comparison of syntactic complexity scores for monolingual and bilingual groups.](image2)
Table 4. Correlation matrix for control groups.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hypothesis quality</th>
<th>Language complexity</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monolinguals</td>
<td>1.00</td>
<td>0.87</td>
<td>0.62</td>
</tr>
<tr>
<td>Bilinguals</td>
<td>1.00</td>
<td>0.74</td>
<td>0.34</td>
</tr>
<tr>
<td>Language complexity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monolinguals</td>
<td>1.00</td>
<td></td>
<td>0.55</td>
</tr>
<tr>
<td>Bilinguals</td>
<td>1.00</td>
<td></td>
<td>0.33</td>
</tr>
<tr>
<td>Reading comprehension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monolinguals</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Bilinguals</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

A consistently higher positive correlation (p < .001) is evidenced between hypothesis quality and language complexity than between these variables and reading.

Interactions between hypothesis quality, language complexity, and reading for the experimental monolingual and bilingual groups are indicated in the correlation coefficients given in Table 5.

Table 5. Correlation matrix for experimental groups.

<table>
<thead>
<tr>
<th>Subjects</th>
<th>Hypothesis quality</th>
<th>Language complexity</th>
<th>Reading</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis quality</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monolinguals</td>
<td>1.00</td>
<td>0.71</td>
<td>0.44</td>
</tr>
<tr>
<td>Bilinguals</td>
<td>1.00</td>
<td>0.98</td>
<td>0.35</td>
</tr>
<tr>
<td>Language complexity</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monolinguals</td>
<td>1.00</td>
<td></td>
<td>0.57</td>
</tr>
<tr>
<td>Bilinguals</td>
<td>1.00</td>
<td></td>
<td>0.43</td>
</tr>
<tr>
<td>Reading comprehension</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Monolinguals</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
<tr>
<td>Bilinguals</td>
<td></td>
<td>1.00</td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis quality and syntactic complexity again correlate for both groups at the .001 level. These variables correlate more closely with one another than either does with reading.

As a summary of the results of this investigation, Figure 3 gives a comparison of the differences in the means for monolinguals and bilinguals on the two variables of hypothesis quality and syntactic complexity.

It can be observed in Figure 3 that the bilinguals as a group scored markedly higher on both variables (hypothesis quality and language complexity) than did the monolinguals.

Conclusions and implications. In summary, evidence from the study of four sixth-grade classes, two of monolingual English-speaking children and two of Spanish-English bilingual children, indicates a high positive correlation between the quality of scientific hypotheses generated and the syntactic complexity of the
language used to express them in writing, suggesting that the
cognitive ability to formulate scientific hypotheses and the lin-
guistic competence to express them involve some of the same
underlying organizing principles.

Figure 3. Comparison of differences in means for
monolinguals and bilinguals.

<table>
<thead>
<tr>
<th></th>
<th>Monolingual children</th>
<th>Bilingual children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hypothesis quality/syntactic complexity</td>
<td>27.9</td>
<td>77.4</td>
</tr>
<tr>
<td></td>
<td>146.5</td>
<td>142.2</td>
</tr>
</tbody>
</table>

As conceptual development takes place, one may expect a
facilitating interaction between certain aspects of divergent
thinking utilized in formulating hypotheses and aspects of
linguistic competence. This is more apparent in levels of syn-
tactic complexity than in reading ability, which introduces se-

tmatic variables that reach beyond the kinds of interactive
relationships examined here.

Results of this study indicate that bilingual children, given
the same instruction by the same teacher in formulating scien-
tific hypotheses in problem-solving situations requiring diver-
gent thinking, consistently outperformed monolingual children
both in the quality of hypotheses generated and in their syn-
tactic complexity. Experimental groups were matched for age
and grade level, but differed on socioeconomic level. The
monolinguals were from a high SES and the bilinguals were
from a very low SES. If socioeconomic level were a critical
variable, prediction on outcomes would undoubtedly favor the
monolingual group. In a previous study, however, Kessler
and Quinn (1977) found that the socioeconomic level of the
child is not a significant variable in the relationship between
the psycholinguistic ability to produce complex syntactic struc-
tures and the cognitive ability to formulate scientific hy-
potheses. Differences do occur, however, between control
and experimental groups. The quality of scientific hypotheses
and the complexity of the language used to express these
hypotheses are significantly higher for both monolingual and
bilingual groups given instruction in formulating hypotheses for science problems. The critical variable in the observed difference between the two experimental groups is bilingualism, access to two linguistic codes, together with the cognitive enrichment interactive with it.

Piaget's theory of internal conceptual development offers explanatory power for the differences observed between the monolingual and bilingual experimental groups. In the Piagetian sense, one may view instruction in the generation of hypotheses as an effort to facilitate the learner's movement to a higher cognitive level of inquiry. The higher scores for the bilinguals suggest that bilingual children experience more fully the conceptual conflict that triggers the equilibration processes of assimilation and accommodation operative in cognitive development. Furthermore, results of the positive effects of bilingualism on problem-solving abilities observed here support Piaget's position which attributes an increasingly important role to language in implementing abstract thought in the stages of concrete operational thought and formal operations, stages characteristically represented in 11-year-olds like the sixth-graders in this study. In summary, the research results given here support other recent research findings which indicate that bilingualism in children can accelerate the development of verbal and nonverbal abilities, and that there is a positive interaction between bilingualism and cognitive functioning, such as the type of divergent thinking examined in the context of science problems.

Implications of findings which indicate the positive effects of bilingualism in children are clearly multidisciplinary and of relevance to a wide range of disciplines. Of particular interest here are the implications for education, not only of minority children but of majority children as well. Results of this study imply that a well-organized bilingual program where children develop in two linguistic perspectives can make the positive interactions of cognitive functioning and language development more fully operative.

REFERENCES


LEARNING A SECOND LANGUAGE:  
CHINESE CHILDREN IN THE AMERICAN CLASSROOM

Lily Wong Fillmore  
University of California, Berkeley

Doubts about whether existing bilingual programs permit non-English-speaking children to acquire the societal language have worried many educators and educational policy makers in this country. Such programs provide their students much more than English: they offer opportunities to acquire the subject matter and academic skills that their lack of English would prevent them from learning in classes where only English is used. But from all appearances, academic advantages unrelated to the learning of English matter little to many of these policy makers where non-English-speaking children are concerned. Bilingual programs are largely judged on whether or not they succeed in getting the children they serve to learn English. In the past several years, the official nervousness felt by decision makers over this question has been manifested in numerous attempts to curtail or eliminate bilingual education in many areas around the country. For example, there have been at least a half-dozen bills introduced in the California Legislature during this past year or so to repeal or radically change the 1976 legislation that made bilingual education mandatory wherever sufficiently large concentrations of non-English-speaking students are found.

This widespread anxiety over whether bilingual programs make it possible to learn English is puzzling; at least it does not make much sense to researchers who have been studying the language learning that takes place in those programs. One wonders how it could be regarded as a question at all by anyone who has worked with non-English-speaking students in American schools. Once they enter school, whether in a monolingual or bilingual program, children encounter the social forces that will have them learning English before long. Very few children can resist these forces and avoid the linguistic
assimilation that is an inevitable part of growing up in this society.

Nevertheless, the anxiety on the part of educational policy makers is real, and therefore the question that causes it ought to be regarded as a problem worth studying. I raise the issue in this paper then: do bilingual classes provide learners with as much exposure to English and as much contact with English speakers as they need in order to learn English as a second language? A question which is fundamental to this issue is this: just how much and what kind of contact with English speakers do non-English-speaking children need in order to acquire English quickly and efficiently as a second language? The research that is being reported here is exploratory; it is work that I expect to follow up with a more formal research effort eventually. This exploratory study was done in connection with my current research on second language acquisition—a longitudinal study examining the sources of individual variation found in the learning of English as a second language by 30 Cantonese and 30 Spanish-speaking children. The study, which is in its first stages, is already showing that it is possible for children to learn English even when the conditions under which they are operating are less than ideal. Ideally, young second language-learners have ample regular contact with speakers of the new language—both age peers and adults.

Prior research indicates that adults and children provide quite different types of linguistic input for young second language learners. Peck (1978) has shown that an adult tends to stress information and meaning in discourse with a child learner, whereas a child interacting with a learner tends to concentrate on social interaction with little concern over informational content. Both kinds of interaction are obviously essential. The type of input learners derive from adults allows them to figure out how meanings and information get expressed in the new language; what they receive from age peers helps them to discover how the language is used socially. My own prior research (Fillmore 1976) indicates that second language learners and speakers of the language to be learned receive the kind of language experience needed to support a language learning effort. It is up to young learners to initiate interactions with the speakers of the language—at least where age peers are concerned—and it is also their responsibility to get these speakers to be willing to provide the kind of language that works as input.

Language that serves as input for acquisition purposes is different from ordinary language. It tends to be less complex, more repetitive and redundant (Ferguson 1977, Snow 1977). Topics tend to be limited to experiences related to the immediate speech situation, or to experiences that are shared by speaker and learner (Phillips 1970), and meanings tend to be overdetermined by a combination of verbal and nonverbal
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contextual cues (Fillmore 1976). These adjustments in language use are made by speakers in response to feedback information provided by learners (Phillips 1970, Snow 1976, Berko-Gleason 1977). The learners indicate the modifications that are needed through evidence of their comprehension or noncomprehension of what has been said; the speakers adjust their speech upward or downward in linguistic and informational complexity as learners give evidence of being capable of processing more complex language and information (Cross 1977). The ability to provide this kind of assistance to learners apparently comes with knowing a language, and it has been shown that even quite young children are able to adjust their language use for the sake of younger learners (Schatz and Gelman 1977).

Precisely how much such exposure to a language is needed before it can be learned is not known. One sometimes finds estimates in textbooks on language teaching that it takes X hours of exposure for young children learning a first language, the figure given based on the number of hours a child is normally awake up to, say, the age of five years; and Y hours for adults, based on the number of hours adults need to spend in intensive language programs in order to achieve a certain level of proficiency. But such estimates are not very informative either about the amount of input learners need or about how much they actually get. A child's waking hours are not filled with talk; and what an adult needs in order to learn a language through intensive study tells us little about what child second language learners need or get through ordinary exposure to a language which is used in school. From experience, we know that the more contact learners have with English speakers, the more English they hear and the faster they learn it. If only language acquisition is considered, the ideal situation for learning would be one language learner placed in a class of perhaps 25 English speakers, with only English used for communication purposes in the classroom. In such cases, most children will learn English in a year, or two at the most. However, experience has shown us that in such situations, until their knowledge of the new language has become usable, learners frequently derive virtually no benefit from school other than learning English. This is the best argument for bilingual education: it permits students to learn other things during this period.

Ideal conditions for language learning in bilingual classes can be suggested too, of course. My candidate for a perfect situation is one in which the proportion of non-English speakers is about equal to that of English-speaking children, where the two languages are used in about equal parts for instructional purposes with a clear functional separation between the two, and where there is ample opportunity for language learners and English-speaking classmates to work and play together. Such a situation would insure that the learners receive adequate and varied exposure to the new language. It exists in
some programs (I am conducting research in two classrooms that are very much like that now), but not in all. In reality, circumstances do not permit anything like the ideal to exist in a great many places. In schools with high concentrations of the ethnic group served by the program, there are simply not enough resources available to support the number of bilingual classrooms that would be required in order to achieve this ideal balance between learners and English speakers.

The rule followed in many places at present is a ratio of 2 to 1, or 3 to 1 between non-English and English speakers. But in many of the schools serving non-English speakers, there are often not enough English speakers to be found to provide even that kind of lopsided balance between speakers and learners. Instead, what is quite common, particularly in schools serving Asian children because their families tend to settle in large ethnic communities in urban areas, are classes where the concentration of limited and non-English speakers is as high as 80 percent to 100 percent. In these schools, it is frequently the case that the only native or near-native speakers of English to be found are themselves members of ethnic minorities, who have their own educational problems to keep them busy. At any rate, it is difficult to recruit very many of them for, say, a Cantonese or Vietnamese bilingual program where they can provide the peer language input needed by the non-English-speaking students. And so it is not uncommon, desegregation orders notwithstanding, to find classes where the only English speaker is the teacher. Can a teacher alone provide the necessary language input to support the language learning efforts of a class of 25 to 30 students? The Canadian French immersion programs have shown us that it is possible, but this is done by the teacher using the target language exclusively for instructional and communicational purposes in the classroom, at least during the initial years of learning. However, for sociolinguistic and pedagogical reasons too complex to go into in this paper, we cannot and would not want to do that in this country.

What, then, about the amount of exposure children can get from programs in which only a part of the time is spent learning in the target language, and there are few or no peer age speakers around to provide additional language input? It would seem that even discounting individual differences among children in how much contact with the language is needed in order to learn, there is quite certainly some rock-bottom level of exposure required to sustain a language learning effort at all. Further, if one assumes the necessity of social interaction with speakers for native-like language to be learned, there is most certainly a minimum level of social contact with English speakers that is required in order to achieve this. The question raised in this paper then is whether classes, either bilingual or monolingual, with less than an ideal concentration of non-English speakers, can supply enough exposure to
English and contact with English speakers to permit the children they serve to learn English.

Methods and subjects. This exploratory study consisting of systematic observations of language use in classrooms serving high concentrations of non-English-speaking Chinese students was carried out in two classrooms in a San Francisco Bay Area school. One is a Cantonese bilingual kindergarten, and the other, an English monolingual kindergarten in the same school. The two classes share the same room, with the English one occupying it in the morning and the bilingual one in the afternoon. Both serve Asian children, but as shown in Table 1, the 26 in the bilingual class are all Chinese, while the 21 Asians in the English class consist of 16 Chinese, 4 Vietnamese, and 1 Korean.

Table 1. Students in the two classes by ethnic background and by language proficiency (at the beginning of the school year).

| Ethnicity            | Language proficiency | Class A* |  | Language proficiency | Class B* |
|---------------------|----------------------|---------|----------------------|---------|
|                     |                      | Non-English | English/ Limited ES | Bilingual |
| Chinese             | 16                   | 2        | 19                   | 3       |
| Vietnamese          | 4                    | 1        |                      |         |
| Korean              | 1                    |          |                      |         |
| Mexican-American    | 1                    |          |                      |         |
| Black American      | 1                    |          |                      |         |
| Unknown             | 1                    |          |                      |         |
| Total               | 24                   | 2        | 19                   | 3       |
| Chinese             | 26                   |          |                      |         |
| Total               | 26                   | 24       | 2                    |         |

*Class A = English monolingual; Class B = bilingual

In addition to these Asian children in this class, there are also three non-Asians—a Mexican-American, a black American, and a child of indeterminate background who has at various times claimed to be Mexican, Portuguese, Filipino, and Chinese. Of the 26 Cantonese-speaking students in the bilingual class, all but two were clearly limited- or non-English-speaking when the school year began last September. The other two were bilingual already, and could be described as reasonably fluent in English. In the English class, all but five of the children were limited- or non-English-speaking; the five who came to school with English included the three non-Asians, the Korean child, and one of the Vietnamese. These are classes in which I am conducting the study on individual differences in second language learning, and I therefore have a large amount of data on the language learning taking place there. The classes were selected for the study because they are quite representative of the kind of
classes Chinese children find themselves in, at least in many parts of California. The English class is taught by a Caucasian English monolingual teacher who specializes in the teaching of English as a second language, and teaches special 'pull-out' ESL classes during the afternoon for upper grade children in the school. She is referred to here as 'Miss A'. The bilingual class is taught by a Chinese-American teacher who is fluently bilingual in Cantonese and English. She is referred to as 'Miss B' in this paper. Miss B is assisted by a bilingual aide from Hong Kong, while Miss A is assisted by Miss B for a part of each morning.

The method used for observations for this pilot study was this: one child was selected from each class for intensive observation of language learning opportunities for a full school day. Selection was made in the following way: a child's name was drawn randomly from among the non-English-speaking children we have been following in our longitudinal study in each of the two classes. The child selected from the English class was Kim-girl (to distinguish her from the various boy-Kims in the class), a five and one-half-year-old child whose family only recently came to the United States. The child selected from the bilingual class was Tony, also five and one-half years old.

Observations were made in two ways: audio-recordings were made in which a microphone was placed as close to the child as possible in order to record as much of what that child said and could hear said during the day, and on-the-spot observational notes were made by an observer (Fillmore), who watched and described on an observation form as much as possible of what was going on around the child, of his or her responses to what was said or going on, and of the interactions that took place between the child and his or her classmates and teachers. Care was taken to note all of the time during which the child was apparently paying attention, and the times when he or she was not. Together, the notes and the transcribed audio-recordings enabled me to reconstruct what took place during that day, and to determine how much of what went on probably made sense to the subject. The idea was somehow to get a measure of how much language spoken in the classroom in a given day could be regarded as usable input for language learning purposes so far as the child was concerned. The question of how to distinguish language one could regard as 'usable' input from that which is just so much background noise to the child was handled in this way: instances of speech in the target language to which the child gave some kind of attention, and chiefly those to which the child made some kind of appropriate response, whether verbal or nonverbal, were taken as potentially usable input. These recorded speech events were transcribed and the instances of speech noted in the observation forms as having been noticed by the child were entered into the tallies. There was a good deal more that went on around the child that he or she took notice of, but only those that
were fairly obvious were counted. The question of whether or not what the child is getting constitutes adequate support for language learning was answered by examining the language data we have been collecting on their developing speech during the past six months in which we have been following these children.

Results and discussion. A comparison of the manner in which the two classes were organized for activities during the observation day shows that the bilingual class (here designated 'Class B') was somewhat more structured than the English one (henceforth, 'Class A'). As Table 2 shows, both teachers emphasize the development of academic skills; note that there was virtually no time spent on nonacademic activities in either class during this day. The once-a-week 'psychomotor' period for Class A happened to fall on the day of the observations, but otherwise that time, too, would have been devoted to academic work.

A major difference between the two classes is found in examining how much teacher-directed activity goes on in each. The organization shown in Table 2 is typical of the daily schedule for both classes. The psychomotor activity is the one departure from the usual routine in Class A. On other days, there is a structured math group lesson in which Miss B, the bilingual teacher, groups the children by ability level and works with each group for about 15 or 20 minutes each. Notice that in Class B, 105 minutes were spent in teacher-directed activity, compared to 55 minutes in Class A. In other words, very nearly twice as much time is spent in such activities in B as in A. The reverse is true for individual work, with 95 minutes devoted to seatwork in Class A, compared to 45 minutes in Class B. These figures reflect the two teachers' preferred educational approaches: Miss A favors an 'open class' approach, giving the children a degree of choice in how they are to pace their own work, and in how to handle a task. Miss B takes a more structured approach. She times each activity precisely, each period lasting 20 minutes. Each student is assigned to a group, and these groups are assigned activities in a rotating order.

This turns out to be crucial where language learning is concerned. Recall that all but two of the 26 children in Class B began the school year as limited or non-English speakers. By organizing as many of the activities as she has as teacher-directed lessons, Miss B has made it possible to guarantee each child a generous exposure to English. Table 3, comparing language use in the two classes, shows how important this was, given the concentration of non-English speakers in this class. Notice that during the teacher-directed activities (the whole class and group work, with the exception of the Chinese reading and writing lesson), from 77 percent to 92 percent of the teacher talk was in English. The student talk was also largely in English, with 88 percent in the ESL group lesson and
<table>
<thead>
<tr>
<th></th>
<th>Class A (English only)</th>
<th>Class B (bilingual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole class</td>
<td>20 mins. Opening (phonics, math, writing instructions)</td>
<td>35 mins. Opening (phonics, writing instructions)</td>
</tr>
<tr>
<td>(Teacher directed)</td>
<td>5 mins Closing</td>
<td>15 mins. Math instruction</td>
</tr>
<tr>
<td></td>
<td>25 mins. total</td>
<td>15 mins. Closing</td>
</tr>
<tr>
<td>Group work</td>
<td>25 mins. Psychomotor (once per week in auditorium)</td>
<td>15 mins. ESL</td>
</tr>
<tr>
<td>(Teacher or aide directed but less structured than whole class activity)</td>
<td>5 mins. Transition</td>
<td>15 mins. Reading readiness</td>
</tr>
<tr>
<td>Seatwork</td>
<td>95 mins. Math, Phonics, Writing</td>
<td>15 mins. Phonics, Writing</td>
</tr>
<tr>
<td>(Individual work at tables with classmates)</td>
<td>15 mins. Math</td>
<td>15 mins. Math</td>
</tr>
<tr>
<td></td>
<td>15 mins. Chinese writing</td>
<td>15 mins. Chinese writing</td>
</tr>
<tr>
<td></td>
<td>45 mins. total</td>
<td>45 mins. total</td>
</tr>
<tr>
<td>Total: 150 minutes</td>
<td></td>
<td>Total: 150 minutes</td>
</tr>
</tbody>
</table>
Table 3. Comparison of language use in classes (attended to by subject in each).

<table>
<thead>
<tr>
<th></th>
<th>Class A (English only)</th>
<th>Class B (bilingual)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole class</td>
<td>25 minutes total</td>
<td>60 minutes total</td>
</tr>
<tr>
<td>(Teacher directed)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher talk</td>
<td>100% English</td>
<td>Teacher talk</td>
</tr>
<tr>
<td></td>
<td></td>
<td>92% English</td>
</tr>
<tr>
<td>Student talk</td>
<td>77% English</td>
<td>Student talk</td>
</tr>
<tr>
<td></td>
<td>23% Chinese</td>
<td>96% English</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4% Chinese</td>
</tr>
<tr>
<td>Group work</td>
<td>30 minutes total</td>
<td>15 minutes - ESL</td>
</tr>
<tr>
<td>(Teacher or aide</td>
<td>Teacher/adult</td>
<td>Teacher talk</td>
</tr>
<tr>
<td>directed)</td>
<td>100% English</td>
<td>88% Eng/12% Chi</td>
</tr>
<tr>
<td></td>
<td>Student talk</td>
<td>Student talk</td>
</tr>
<tr>
<td></td>
<td>46% English</td>
<td>89% Eng/11% Chi</td>
</tr>
<tr>
<td></td>
<td>54% Chinese</td>
<td></td>
</tr>
<tr>
<td>Seatwork</td>
<td>95 minutes total</td>
<td>15 minutes - Phonics</td>
</tr>
<tr>
<td>(Individual activities)</td>
<td></td>
<td>Teacher talk</td>
</tr>
<tr>
<td></td>
<td>Teacher talk</td>
<td>77% Eng/23% Chi</td>
</tr>
<tr>
<td></td>
<td>Student talk</td>
<td>Student talk</td>
</tr>
<tr>
<td></td>
<td>28% English</td>
<td>44% Eng/56% Chi</td>
</tr>
<tr>
<td></td>
<td>72% Chinese</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 minutes - Chinese writing</td>
<td>Teacher talk</td>
</tr>
<tr>
<td></td>
<td>Teacher talk</td>
<td>0% Eng/100% Chi</td>
</tr>
<tr>
<td></td>
<td>Student talk</td>
<td>Student talk</td>
</tr>
<tr>
<td></td>
<td>0% Eng/100% Chi</td>
<td></td>
</tr>
</tbody>
</table>
96 percent in the whole class lessons. During the phonics group work, the student use of English dropped to 44 percent largely because this lesson, which was taught by the aide, was more loosely structured and therefore permitted more informal discussion among the students during the lesson; and as they customarily do, they spoke to one another in their first language, Chinese.

The proportionate use of English for instructional purposes is high, although some Chinese is used during each lesson. It was used chiefly for explaining concepts and instructions that might have been difficult for the children to comprehend, had they been given in English only. At this point of the year, however, the teacher is using Chinese less and less, except during the Chinese lesson. As the figures in Table 3 show, she is able to get by almost exclusively with English, managing somehow in the six months since the beginning of the school year to get the children to handle quite advanced work almost entirely in English. The use of English has been increased gradually since the beginning of the school year, the increase matching the children's developing ability to understand and use English. By the time these observations were made, then (March 12, 1980), the children were hearing and using a great deal of English each day. In fact, the only period in which Chinese was being used exclusively was the Chinese reading and writing lesson. Table 4 shows just how many instances of understandable English each of the two subjects apparently heard and attended to during the opening instructional periods in each class.

In both Class A and B, the teacher talk, especially that directed toward the whole class, tended to be drill-like. The language used in these group lessons can be described as ideal for language learning purposes: it is repetitive, redundant, and clear. Aside from small changes, the same set of expressions was used again and again, and the gestures and demonstrations that accompanied the talk allowed the children to figure out what was being said. In the lesson summarized in Table 4, Miss B drew pictures on the board to illustrate the points she was trying to make as she talked. This device worked in two ways: it captured the children's absolute attention and it helped them to understand what she was trying to communicate. The following excerpts from the transcripts will illustrate how Miss B's language of instruction becomes a language lesson.

Miss B

Miss B is giving the class directions on what to do with a paper on likeness and difference. There are about eight rows of pictures; the left-most one in each row is enclosed in a box. Some of the figures in each row are identical to the one in the box, others vary from it in small ways. The
Table 4. Comparison of language use in whole class opening activity.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Class A (English only)</th>
<th>Class B (bilingual)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>20-Minute opening</td>
<td>35-Minute opening</td>
</tr>
<tr>
<td></td>
<td>Group instruction in</td>
<td>Group instruction in</td>
</tr>
<tr>
<td></td>
<td>Phonics, Math, and Writing</td>
<td>Phonics and Writing</td>
</tr>
<tr>
<td>Language</td>
<td>English</td>
<td>Chinese</td>
</tr>
<tr>
<td>Teacher talk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Teacher to all</td>
<td>N=77</td>
<td></td>
</tr>
<tr>
<td>Teacher to individual</td>
<td>N=20</td>
<td></td>
</tr>
<tr>
<td>Teacher to subject</td>
<td>N=0</td>
<td></td>
</tr>
<tr>
<td>Total*</td>
<td>N=92</td>
<td>N=0</td>
</tr>
<tr>
<td>Student talk</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Student-teacher</td>
<td>N=18</td>
<td></td>
</tr>
<tr>
<td>Choral response</td>
<td>N=42</td>
<td></td>
</tr>
<tr>
<td>Student-student</td>
<td>N=13</td>
<td>N=22</td>
</tr>
<tr>
<td>Total*</td>
<td>N=73</td>
<td>N=22</td>
</tr>
</tbody>
</table>

*Number of separate utterances in each language.
idea is to write an S under the ones that are identical and a D for those that are different from the one in the box. She has already exemplified the procedure by a series of drawings she made on the board, eliciting judgments of 'same' or 'different' from the children as she drew each. She has also explained the idea of same and different in Chinese to insure the comprehension of these notions. She also went over the initial sounds in the two words, thus helping the children understand why S is to be used for 'same' and D for 'different'. Now she holds up the paper.

Miss B: OK, I'm going to do this paper first. Is this star the same or different?
Class: Same!
Miss B: What should I write?
Class: S!
Miss B: Why?
Class: Same!
Miss B: Yes! (She prints an S under the first star in the row, and then goes on to the next.)
Is this star and this star the same or different?
Class: No!
Miss B: Are they the same or different?
Class: Different!
Miss B: What should I write for d-d-different?
Class: D!
Miss B: (Prints a D under the picture and then goes to the next.)
Is this star and this star the same or different?
Class: Different!
Miss B: What should I write?
Class: D!
Miss B: Is this star and this star the same or different?
Class: Same!
Miss B: What should I write?
Class: S!
Miss B: Yes, S for same!

She goes through the rest of the sheet in this manner, showing the class the procedure for comparing each item with the one in the box on the left-hand side of the row, and the reason for using S or D to indicate the result of each comparison. (Opening, March 12, 1980)

An excerpt from the transcript of Miss A's opening lesson during the day of the observations shows her use of the same technique.
Miss A

Miss A is giving the class instructions for a sheet on which they will be working during the seat work period. She has some geometric forms on the table (orange squares, green circles, red triangles, etc.) which she has already gone over, naming each and eliciting the names and colors of the forms from the class. Now she shows them the sheet and asks them to observe and name the shapes drawn on it. Then, holding the triangle up to the sheet and placing it over a triangle drawn on it, she asks:

Miss A: What color is the triangle?
Class: Red!
Miss A: What color is the circle?
Child: Yellow, no! Green.
Class: Green.
Miss A: What color is the square?
Class: Orange.
Miss A: What color is the rectangle?
Class: Yellow!
Miss A: (Holding up the triangle and placing it on the triangle drawn on the sheet:)
What color will I color this triangle?
Class: Green! (a few scattered other colors such as:)
Red! Green!
Miss A: Green! What color will I color the rectangle?
(showing them the figure)
Class: Red! No! Yellow!
Miss A: What color will I color this circle?
Class: Red!
Miss A: Yes, red! (Opening, March 12, 1980)

In contrast to the teacher-directed activities where very nearly as much English is used by the bilingual teacher as by the English monolingual teacher, and where the children speak mostly in English, the seatwork activities in which the children work individually with papers and other materials are characterized by far less English in both classes. During these periods, the children work independently on their projects, chit-chatting with one another as they do. Some English is used at such times in both Class A and B, but it is proportionately a lot less than during the teacher-directed activities: 28 percent of the student talk in Class A during seatwork is carried out in English, and 21 percent in Class B, compared with figures of 77 percent in English during teacher-directed activities in A, and 96 percent in Class B. Teachers or teacher-like adults (such as the members of the resident research team) are available to assist and advise the children on their work and the children frequently call on them for help or attention.
These adults use whatever language seems most appropriate, given the child's ability, and their own ability to speak the languages spoken by the children. Hence in Class A, all of the teacher talk during the seatwork was in English, while 72 percent of the teacher talk in Class B was in English. The relatively low use of English among the students in both of these classes reflects the fact that they are, after all, still much more fluent in their first language than they are in their second. They are quite naturally inclined to use a language they can use freely in talking to one another rather than one in which their skills are still limited. In Class A, the few non-English-speaking children who are not Chinese speakers tend to use more English than they do their own language, Vietnamese. They often do use Vietnamese among themselves, but they have to use whatever English they know, if they are to communicate with the other children in the classroom. Whatever English is used by all of these language learners, no matter what their first language, tends to be what I have described as formulaic speech, sentences of the following type: 'Whaddya know!' 'I know how!' 'I'm telling on you!', and 'Take it easy!' These are expressions that the children have learned as unanalyzed chunks in the context of social use from English-speaking peers, no doubt, and which play an important function in the acquisition process itself (Fillmore 1976). However, a difference is beginning to be apparent between the formulaic chunks being acquired and used by the children in Class B compared with those being learned and used by the children in Class A. In Class B (the bilingual class), these apparently unanalyzed forms tend to be expressions the children have acquired from their teacher in the course of instruction, both in the ESL lesson and in other lessons. These expressions tend to be formal and proper: 'May I go to the bathroom?' 'What should I write?' In fact, the children frequently play with the expressions they have learned through their formal ESL lessons. Consider, for example, this pattern recitation by the child, Tony, who was being observed for this study from Class B.

While getting settled for the March 12, 1980 ESL lesson, Tony suddenly begins reciting to himself. He gets louder and louder as he does.

What is that? That is a dok (dog)!
What is that? That is a baseball.
What is that? That is a telephone.
What is that? That is a robin!
(Etc., etc., for 33 turns, including the following:)
What is that? That is a teenage queen!
What is that? That is a you.
What is that? That is a alphabet.
What is that? That is a Eleanore. Etc., etc.
(March 12, 1980)
He managed to run through 33 versions of this question-and-answer drill, and he might have come up with 33 more, except that Miss B located his off-switch, thereby preventing him from totally exhausting his English lexicon. The children engaged in this kind of private pattern practice apparently for the fun of it. On the day of the observations, another child recited a litany of apologies to himself as he worked on his math paper: 'I'm solly, William; I'm solly, James; I'm solly, Tony ...' The children in Class A practice in much the same manner, except that their expressions are more usually formulas they have acquired from the English speakers in the class. Consider, for example, Kim-girl's play with the expression 'gip me' (give me) in the following excerpt from the transcripts of the audio-taped observations.

Kim-girl is at the table doing seatwork. Cathy, Sin Man, Suk Wah, and Chui-Wing are at the same table; they have been arguing over the possession of a pink eraser all morning.

Cathy: Gimme 'raser! Eraser! (Takes Kim-girl's eraser.)

Kim-girl: (Looks up crankily. Turns to LWF and complains:)
Can I eraser? Se took my 'raser. Small 'raser. Se want 'raser. This Edlyn gip me.
(She then grabs the microphone which has been placed right in front of her, and says into it:) Gip me 'raser, yah! Gip me pencil, yah! Gip me chopstick, no! Gip me crayon, yah! Can I hab color? No way! That's all! Bye-bye!
Cathy one small $%##&-er! (March 12, 1980)

In summary, then, it appears that the children in both the English monolingual class and the bilingual class are learning English, despite the fact that there are no native speakers in one, and few in the other. Their progress with English has been impressive, but they are not home free yet. Both groups of children need to have contact with more peer age speakers than they presently do in order to acquire a native-like command of English eventually. Impressionistically, since the data are not all in yet, the children in the bilingual class have acquired somewhat more advanced skills in English than have those in the English monolingual class. This has been due largely to the formal ESL instruction the children have been receiving daily from Miss B, and to the emphasis that she has placed on language development in her other instructional activities.
The language exposure that has been available through these teacher-directed lessons appears to have made up for the lack of peer age speakers in the classroom. In the absence of these experiences, the children would have heard a good deal less English, and would have used their first language much more in class during this first school year. What English they use among themselves is still imperfect—they have, after all, been speaking English for only six months. If the class were less structured, the children would probably be talking more among themselves, relying on their first language for communication purposes, and practicing their newly acquired English on one another. This just learned and as yet imperfect English then would function as linguistic input for the children themselves—it is a kind of input that Selinker has aptly described as 'junky data'. It can result in the acquisition of a version of the language which is sufficiently different from the target language to be described as a special dialect, which apparently has been happening to some of the children acquiring French through the Canadian immersion programs (Selinker, Swain, and Dumas 1975). Another reason why these children need contact with peer age native speakers of English is that it is only from them that they can discover how English-speaking children speak. What they are learning from their teachers now is school talk; it will help them in making contact with English-speaking children eventually, but only those children can help them to sound like English-speaking children.

This study, preliminary as it has been, has shown me that there are points that educators probably need to keep in mind in planning programs intended for non-English-speaking children. The first has to do with the relationship between classroom structure and language use. It seems quite clear that where the concentration of non-English-speaking children is high, classes need to be as structured as Miss B's in order to insure that the learners receive an adequate exposure to the new language. Such teaching is not easy. It calls for the teacher to take account constantly of how much learners know and can handle, and to modify the language used for instructional purposes accordingly. A relatively open class format such as that used by Miss A works only if there are enough English speakers in the class to make it work. It may be that the five in Class A constitute the lowest allowable quorum where language learning is concerned. In such a setting, the amount of language available to any individual learner as input will depend on the learner's own ability to seek out the children in the classroom who speak English, and to get into some kind of sustained interaction with them. Not all children can do that, and with so few English speakers around, it is not all that easy to find anyone to interact with. Hence the amount of contact the children are likely to have with speakers is subject to variation. Miss A compensates for that variation by
conducting some activities as teacher-directed ones. She also manages to interact with the children on an individual basis frequently enough for that interaction to work for language learning purposes.

How well these children learn English will depend on their continuing to have teachers who are willing to consider their linguistic and social needs. For now, it appears, they are in good hands.

REFERENCES

IMPLICATIONS OF THE ORAL/LITERATE CONTINUUM FOR CROSS-CULTURAL COMMUNICATION

Deborah Tannen
Georgetown University

In pursuit of understanding linguistic phenomena in discourse, I am always in search of factors motivating linguistic choices. A research area that goes far to explain findings of my own and others' scholarly investigations discusses oral vs. literate tradition. Begun in the sixties as an attempt to explore the impact of writing on cognitive and rhetorical processes, work in this area has been advanced by researchers in anthropology, literature, and cognitive psychology. I suggest their findings are enlightening as well for linguists. Elsewhere I have discussed implications for an understanding of the relationship between spoken and written language in various modes (Tannen 1980a and in preparation a) and of communicative style (Tannen 1980b and in preparation b). Here I explore implications for cross-cultural communication.

I briefly outline research in oral/literate tradition and suggest that the key distinction is not between orality vs. literacy as such, but between strategies that have been associated with oral and literate tradition which can be employed in any mode. What has been called 'oral tradition' is language use which emphasizes shared knowledge or the relationship between communicator and audience; what has been called 'literate' emphasizes decontextualized content or downplays communicator/audience interaction. As communication can contain more or fewer of the strategies associated with these traditions, to greater or lesser degrees, I further suggest that the distinction be conceived of not as a dichotomy but rather as a continuum.

In discussing implications of the oral/literate continuum for cross-cultural communication, I draw upon findings of my research on narrative and conversational strategies. I refer to cross-cultural communication on three levels: (1) between
natives of different countries (Greeks and Americans); (2) between compatriots of different cultural, ethnic, or geographic backgrounds (Americans of Greek, Jewish, and nonimmigrant parents and grandparents from New York and California); (3) between women and men.

I suggest that nearly all communication is to some degree cross-cultural, in the sense that no two people have exactly the same background and, consequently, precisely the same expectations about interaction. Expectations, however, are more strikingly different when backgrounds diverge more drastically; hence, cross-cultural differences are greater in (1) than (2), and in (2) than (3).


Lord (1960), following Parry, had demonstrated that oral epics were not memorized but reconstructed at each telling through the imposition of formulaic phrases on the skeleton of a familiar plot. Inspired by this insight, Havelock (1963) surmised that the difference between oral reconstruction and rote memory associated with oral vs. literate tradition, respectively, is not just a habit of expression but represents a difference in approach to knowledge and thought. In literate society, knowledge is seen as facts and insights preserved in written records. As Ong (1967) also points out, in oral culture, formulaic expressions (sayings, cliches, proverbs, and so on) are the repository of received wisdom.

Formulaic expressions function as wholes, as a convenient way to signal knowledge that is already shared. In oral tradition, it is not assumed that the expressions contain meaning in themselves, in a way that can be analyzed out. Rather, words are a convenient tool to signal already shared social meaning. Thus, in an oral tradition, as has been pointed out elsewhere (Tannen and Oztek 1977), it does not matter whether one says 'I could care less' or 'I couldn't care less'. The expression is, in either case, a handy way to make reference to a familiar idea. As Olson (1977) puts it, 'the meaning is in the context'. In contrast, in literate tradition, 'the meaning is in the text'.

Ong observes that in oral tradition, thought is 'exquisitely elaborated' through a stitching together of formulaic language which he calls 'rhapsodic'. In literate tradition, thought is analytic, sequential, linear. Olson notes that truth, in oral tradition, resides in common-sense reference to experience, whereas in literate tradition it resides in logical or coherent
argument. It is the oral sense of truth that comes naturally. Hence, says Olson, most people cannot distinguish between a conclusion that is logical and one with which they agree.

Ong explains furthermore that 'knowing' in oral tradition is achieved through analysis. This follows Havelock's assertion that understanding in oral tradition is objective. It explains the fact—puzzling and disturbing to modern scholars—that Plato would have banned poets from participation in education in the Republic. Because of their ability to move audiences emotionally, poets were a dangerous threat to the transition to literacy, by which people were to learn to suspend their emotions and approach knowledge through analytic, logical processes.

Olson points out that children learn language through use of formulas; Wong Fillmore (1979) has demonstrated this for second language acquisition. That is, children do not learn the meanings of individual words and rules for putting them together, like Tinker toys and sticks. Rather, they learn strings of words associated with fixed intonation and other paralinguistic features, to be uttered in certain social settings. By trying the expressions out in various settings, they arrive at correct associations—or at least they approximate correct associations more and more closely."

I hypothesize that when children do learn that words have literal meanings, they go through a stage of overapplication of this principle. This accounts for their inclination, at a certain age, to interrupt their parents during adult conversation with complaints like 'That's not what he said', and offer corrections that do not change the sense at all, to the parents' great annoyance. This stage of language development furnishes Hank Ketcham with numerous Dennis the Menace jokes which derive humor from the boy's literal interpretation of words that were meant formulaically.

In a broad sense, then, strategies associated with oral tradition place emphasis on shared knowledge and the interpersonal relationship between communicator and audience. In this, they 'elaborate' what Bateson (1972) calls the meta-communicative function of language: the use of words to convey something about the relationship between communicator and audience. Literate tradition emphasizes what Bateson calls the communicative function of language: the use of words to convey information or content. This gives rise to the idealization that language can be 'autonomous' (Kay 1977)—that is, that words can carry meaning all by themselves, and that it is their prime function to do so.

Scollon and Scollon (to appear) caution against generalizing the 'bard and formula' notion of orality propounded by scholars whose work I have discussed here. The Scollons note that oral traditions can differ strikingly, and they demonstrate this with Athabaskan examples. They suggest instead a distinction between focused and nonfocused situations. The former is one
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in which 'there are strong limitations on negotiation between participants'; the latter is one in which 'the highest value is on mutual sense making among the participants'.

Their argument reinforces the awareness that it is not 'orality' per se that is at issue but rather the relative prominence of communicator/audience interaction on the one hand, as opposed to the relative prominence of decontextualized content on the other. For the present discussion, I am going to continue to refer to strategies associated with oral vs. literate tradition, because this is the framework in which the work discussed has been done. However, I do not intend to imply that all oral traditions make use of these strategies nor that they are inherently oral in nature.

All these scholars point out that literate tradition does not replace oral. Rather, the two are superimposed upon and intertwined with each other. Similarly, no individual is either 'oral' or 'literate', but rather uses strategies associated with one or the other tradition in various settings. Goody and Watt (1963) suggest that oral tradition is associated with the family and in-group, while literate tradition is learned and passed on in the decontextualized setting of the school. Certainly this is true, in a prototypical sense. But strategies associated with one or the other tradition can be realized in any setting and in any mode. Literary fiction, for example (Tannen 1980a), uses many strategies that have been considered oral in a written mode.

Cook-Gumperz and Gumperz (1980) point out that strategies associated with literate tradition have been conventionalized in Western countries for oral use in public settings. In fact, it is clear that many middle class families employ strategies associated with literate tradition in the home. This can be seen in their prodding children to 'get to the point' and 'stick to the point'. An outgrowth of such attitudes, too, can be seen when parents and teachers tell children that their talk ought to be 'logical', that, for example, 'two negatives makes a positive', as if sentences can and ought to be analyzable to constituent parts, like mathematical equations. In fact, in interaction, it does not matter how many negative particles a sentence contains, except insofar as more may be better, as in vernacular Black English, which requires negative concord (Labov 1969).

It seems, then, that 'mainstream' middle class Americans have conventionalized verbal strategies and linguistic attitudes associated with literate tradition for use in a wide variety of contexts, whereas Americans of some ethnic and geographic backgrounds, as well as members of other cultural groups (including Greeks), have conventionalized more discourse strategies drawing upon oral tradition for use in a broad range of settings.

It has been suggested that many black children approach school tasks as real-world problems, rather than as decontextualized tasks. Thus, in choosing a word to answer a question on a reading test, they do not limit themselves to the information given in the paragraph presented but choose an answer
that takes into account their broader experience (Aronowitz to appear, Nix and Schwarz 1979). The following discussion considers some of the strategies associated with oral vs. literate tradition and shows the effects of their use in cross-cultural communication.

**Formulaic language.** Ong observes that Americans overvalue strategies associated with literate tradition. 'Most Americans', he says,

> even those who write miserably, are so stubbornly literate in principle as to believe that what makes a word a real word is not its meaningful use in vocal exchange but rather its presence on the pages of a dictionary (1979:2).

In the same spirit, most Americans feel that they ought not to use formulaic language. They feel that fixedness implies insincerity; hence the word 'cliche', with its negative connotation. This attitude persists despite the fact that no one can talk without extensive use of formulaic speech. Fillmore (1979) suggests that 'a large portion of a person's ability to get along in a language consists in the mastery of formulaic utterances'. Nonetheless, many Americans, when uttering formulas, make excuses ('I know this is a cliche, but ...' 'Everyone must say this, but ...') or otherwise mark their expressions with verbal or nonverbal equivalents of quotation marks.

Speakers in many other cultures highly value formulaic use of language. For example, speakers of Greek and Turkish (Tannen and Oztek 1977, Zimmer 1958), Yiddish (Matisoff 1979), Arabic (Ferguson 1976), and other languages seem to be happiest if they can find a fixed way of saying what they mean. For one thing, this lends to their utterance the weight and legitimacy of received wisdom: if everyone says it, it must be true. Second, it assures them that they are making a socially appropriate conversational contribution.

Situational formulas of the type found in Turkish and Greek (Tannen and Oztek 1977, following Zimmer 1958) are rigid collocations that are always said in particular social settings. Their omission carries meaning; it is perceived as a social gaffe or an intended slight, just as in American culture hanging up the telephone without saying 'goodbye' constitutes a positive act that might be reported: 'S/he hung up on me.' Rigid situational formulas are a prototype of formulaic language, or one end of a continuum of fixedness in language use, the other end of which might be a totally new thought expressed in a totally original syntactic pattern. There is a range of relative fixedness and relative novelty along the continuum, including use of familiar combinations of words, familiar syntactic patterns, and so on. As Jarrett (1978) demonstrates for blues lyrics, all utterances are 'inevitably traditional', although the degree of fixedness may range from use of
clearly recognizable formulas to totally new lines which are formulaic in their adherence to recognizable patterns of rhythm, metaphor, register, syntax, and so on. Similarly, in everyday interaction, individuals differ with respect to the relative frequency of their use of more or less formulaic language, and cultures differ with regard to value placed on relative fixedness vs. relative novelty in expression. These value differences may be seen as expressions of attitudes toward language associated with literate vs. oral tradition.

What are the consequences in cross-cultural interaction of differing attitudes toward formulaic use of language? A person accustomed to using utterly fixed expressions, such as Greek situational formulas, feels linguistically hamstrung if s/he cannot find equivalents in the language s/he is speaking. To understand this effect, one need merely imagine trying to end a phone conversation without uttering a conversational closing. What then can a speaker do when feeling called upon to utter a formulaic expression in conversation in a different language?

One possibility is to borrow the formula from the other language, or to translate it into the language spoken. Zimmer (1958) notes that Germans residing in Turkey had the habit of uttering Turkish situational formulas in otherwise monolingual and monocultural German conversation. Similarly, Jewish Americans, God bless them, often utter Yiddish formulaic expressions in English conversation—either in Yiddish or in English translation. This strategy, however, is successful only in interaction with others who are familiar with the formulas—in other words, in communication that is not strictly cross-cultural.

In interaction with others who are not familiar with the situational formulas—or who do not recognize the formulaic nature of an utterance because they are not familiar with the paradigm—the speaker may choose to omit them (if possible), thus operating with a reduced linguistic repertoire, with attendant frustrations. However, a speaker often does not realize, or does not realize in time, that an utterance is 'formulaic', since so much of speech is habitual and seems self-evidently appropriate. In that case, the formulaic utterance is used, and the interlocutor may not recognize its formulaic nature. Then, at the very least, a level of resonance is lost, much as a literary allusion is lost on someone who is not familiar with the source. Thus a lack of richness is experienced in cross-cultural communication. Even worse, however, the utterance may be taken literally and therefore seem odd. At the very worst, its intention can be missed entirely. In the event that an interlocutor perceives correctly the formulaic nature of an utterance, s/he may find its use charming or quaint, or lazy or insincere, depending upon his or her attitude toward use of formulaic language. A final strategy, as pointed out to me by Penelope Alatis, is to translate the formula and explain its meaning and use. This, however, enlarges the formula to a topic of talk rather than simply a vehicle for expression.
I have found that Greeks are more likely to explain motivations, events, and so on with reference to familiar sayings, and that this accounts in part for the fact that they sometimes strike Americans as romantic, trivial-minded, or unsophisticated. But a reverse phenomenon occurs as well. I can recall a time before I knew Modern Greek, when I heard Greeks use expressions in English that I now know are formulaic in Modern Greek. At the time they struck me as highly imaginative, poetic, and charming. I have a suspicion that this phenomenon contributes to the fact that young American women travelling in Greece often find young Greek men inexpressibly charming and poetic. It is an instance of the broader phenomenon pointed out by Sapir (1958) that in communicating with speakers from a different culture, one cannot distinguish between individual and culturally shared style.

Women and men. The phenomenon of using language in a fixed and formulaic way is significant in another kind of cross-cultural communication: talk between women and men. There is a stereotype among Americans that women use language carelessly, that they are not precise, that they talk too much (Lakoff 1975). It has been shown, too, that women pay more attention than men to interpersonal dynamics in conversation—that they are more sensitive than men to nonverbal and paralinguistic cues: the channels that are emphasized in oral tradition. Fillmore (1979) counts as one of four kinds of verbal fluency 'the ability to have appropriate things to say in a wide range of contexts', and he notes that such fluency is often associated with skillful manipulation of fixed expressions. This is the only kind of fluency which he exemplifies with reference to a female (Barbara Walters).

I suggest that in their attention to the interpersonal dynamic of conversation, women are more likely to make use of verbal devices that build upon shared cultural background and context, among them formulaic language. However, since Americans tend to devalue strategies associated with oral tradition, they place more value on the 'precise' and 'analytic' use of language which is prototypically associated with literacy and with men. Thus, the discontinuity in expectations of a 'good person' and a 'good woman' which has been found in other domains (Broverman et al. 1970), may hold as well for the use of formulaic language. As Lakoff (personal communication) has suggested, this may account for the puzzling phenomenon that American women, who clearly have more 'rights' than their counterparts in other cultures, seem to be more disturbed by male/female differences. It may be that in those other cultures a high degree of attention to interpersonal dynamics—as seen, for example, in use of formulaic language—is valued for both women and men.
What to say: Commonplaces, personalizing, philosophizing. The use of formulaic or well-worn language is closely associated with what is said; form and content are intertwined. Just as Greeks find it appropriate to use familiar expressions, so they are more disposed to utter sentiments that are familiar and often reiterated. Just as Americans find it insincere to utter cliches, so they think it better to say something novel than something that has been said often before.

These differing expectations showed up in oral narratives told by Greeks and Americans. Under the direction of Wallace Chafe at the University of California, Berkeley, a film was made which had sound but no dialogue, showing a series of simple events: a man was picking pears; a boy took a basket of pears; he fell off his bike and was helped up by three other boys; he gave the three boys pears; and they ate them as they passed by the pear-picker. The movie was shown to 20 American women and they were asked to tell what they had seen. I took the film to Greece and elicited narratives from 20 Athenian young women. For one thing, in telling about the film, the Greeks in the study were far more likely to try to find a theme or general meaning for the film, and in so doing, they often chose culturally familiar themes, such as the beauty of agricultural life. A readiness to make use of culturally familiar explanations showed up in many ways. For example, in explaining why the boy fell off his bicycle, almost half (nine) of the Greeks made reference to the appearance of a girl, cueing a familiar boy-meets-girl 'script' (see Tannen 1979a for discussion of scripts, frames, schemata). The Americans did not do this. They only mentioned the girl if they were making reference to her in their explanation of causality of the fall.

Another related dimension is the tendency to talk in terms of personal experience and to instantiate rather than talk in abstract or general terms. For example, several of the Greeks followed up their summaries of what happened in the film with their own ideas of what it all meant, in a way that sounds to Americans like 'philosophizing'. One Greek speaker made much of the 'conflicts' in the film, and another focused on the many 'falls', relating this to her pessimistic outlook in general and the difficulty she was experiencing in her own life at the time.

In a comparative study of indirectness in conversation (Tannen 1976), I asked Greeks and Americans, on a questionnaire, for their interpretations of a hypothetical conversation between a husband and wife about whether or not to go to a party. In answering the question, many of the Greeks made reference to their own experience: 'That's the way my husband would do it', or 'That's how it happens in my house'. Others answered by instantiating the conversation: 'The wife is probably home all day while her husband works, so she'd probably want to go to the party.' In contrast, the Americans tended to answer in terms of the dialogue itself: 'The husband said OK, and OK means yes.' Thus, the Greeks were
more inclined to instantiate, to personalize, and to answer in terms of broader context. A later study (Tannen 1979c), administering the same questionnaire to Greek-Americans, found that native-born Americans of Greek parents and grandparents exhibited strategies slightly closer to those of the Greeks than those of the Americans. In other words, communication between Americans of different backgrounds is also cross-cultural communication, and those who speak what is ostensibly 'the same language' may nonetheless be using and expecting strategies influenced by those of parents, grandparents, other relatives, or peers of different cultural backgrounds.

Interpretation vs. reporting. Other patterns emerged in the stories about the film which are related to the tendency to personalize. Americans seemed to approach the narrative production as a memory task. They seemed to include as many details as possible, as accurately as possible, and were very concerned with the temporal order of events. In contrast, the Greeks seemed to approach the task as they would storytelling in conversation. Their narratives were shorter, since they included only those details which contributed to the theme they chose to develop. They made more interpretive leaps, such as omitting details or even events which did not contribute to the theme; reporting characters' feelings; calling the man a 'farmer' and the fruit 'harvest'; and adding events that did not occur.

For example, there is a scene in which a boy and girl are seen approaching each other on their bicycles, followed by one in which the boy falls off his bike. Four Greeks say directly and two imply (a total of more than 25 percent) that the boy fell off his bike because he collided with the girl. No Americans say this, although two note that they thought the bikes would collide but did not. I would hypothesize that the expectation that the bikes would collide was present for both groups of viewers, but the Greeks were more likely to commit themselves to the interpretation that (1) followed a familiar script and (2) made a better story. The Americans were more concerned with reporting precisely what the film showed. The commitment to 'stick to facts' is a strategy associated with literate tradition; the tendency to interpret, to make a story fit a familiar form, is associated with oral tradition. Another major difference between the two groups was that Americans tended to tell about the film as a film. They often repeated phrases that reminded the hearer that what was being talked about was a film ('the scene switched', 'the camera panned', and so on). The exercise of their critical faculties was most often aimed at criticizing the film-maker's technique. Thus they said the costumes were unconvincing, the soundtrack unnatural, the action too slow ('He'd never make it as a pear-picker'). In contrast, the Greeks focused their critical
acumen on the characters in the film and their actions. They made judgments: the boy should not have taken the pears, he should have thanked his helpers sooner. They often made interpretations of meaning (the scene showed that children love each other). Insofar as all communication is a matter of presentation of self (Goffman 1959), the Americans' concern is to present themselves as able recallers and film critics. The Greeks are concerned with showing that they are good judges of character and film interpreters. Again, the Greeks are .. employing strategies recognizing personal involvement--hence oral tradition.

Male/female differences surface as well. My comparison of Greek and American women's narratives discovered that the Greek women tended to interpret more, whereas the Americans reported. However, the American women sometimes reported their personal reactions to the film as a film. For example, some reported their ongoing experience as film viewers, as in 'I thought the boy would fall'. The use of adjectives often revealed interpretive processes ('He was really brazen'). In comparing the narratives told by American men and women, Dodge (1980) and Patrick (1980) found that the American women made more interpretive comments than the men. The men tended to tell 'streamlined' narratives in which they stuck to reporting action. Thus, there seems to be a continuum of interpretive personalizing on which American men are at one end and Greek women at the other, with American women in between. Unfortunately, no narratives were collected from Greek men.

Storytelling in conversation. Another dimension of oral and literate strategy differences occurs in storytelling. As Gumperz (1977) and Fillmore (1979) note, to participate in conversation, people need a notion of how conversation is done—they must have a 'schema' for the construction of conversation and its parts. One such element is the telling of stories.

I have analyzed the natural conversation spontaneously generated at a Thanksgiving dinner among Americans of different geographical and ethnic backgrounds (Tannen 1979c, 1980d). Three participants were Jewish and from New York; two were of English/Irish and English/Italian background, both raised as Catholics. The sixth person was British. In the course of two and a half hours of conversation, all participants told stories. Analysis of the structures and the content of the stories told showed that those who were ostensibly from 'the same culture'--middle class Americans--had very different expectations of how stories should be told.

A framework for the analysis of narratives in conversation is provided by Labov (1972), based on stories told by black teenagers. Labov notes that in telling a story, a speaker's main job is to make clear to the audience what the point of the story is—to answer in advance the 'withering question', 'So what?'
Speakers communicate the point of a story—i.e. their attitude toward what is being said—by means of 'evaluation', either external or internal. External evaluation is the obvious kind: the teller steps outside the story to poke the reader verbally and say, 'Hey, here's the point'. This can be done by such comments as 'And this was the incredible thing', or by explaining, for example, 'When he said that, I felt awful'. Internal evaluation is not so obvious. It resides in all levels of verbalization such as expressive phonology, speeding up or slowing down, repetition, lexical choice, and so on. Direct quotation is a common form of internal evaluation. By putting words in the mouth of the characters, the teller communicates what happened from inside the story. Nonetheless, by deciding what words to put in the character's mouth, the teller is building the story toward the desired point.

Labov demonstrates that middle class white speakers tend to use more external evaluation, while inner city blacks use more internal evaluation. He notes as well that internal evaluation makes a better story. I believe this explains the often perceived phenomenon of 'good storytellers' among working-class people, rural people, or members of certain cultures, including Jews and Greeks. I suggest that the phenomenon results from use of strategies associated with oral tradition. Oral tradition depends for its impact on the creation of a sense of identification with characters and tellers of stories, whereas literate tradition depends upon an intellectual understanding of the principles or points to be made. Internal evaluation contributes to the sense of identification, while external evaluation makes explicit what the point is—a feature of literate-based strategies. As Kay (1977) points out, use of language prototypically associated with literacy in an industrial society is 'autonomous'. Whatever is needed for comprehension is included in the words of the text (external evaluation). In contrast, nonautonomous language depends on 'simultaneous transmission over other channels, such as the paralinguistic, postural and gestural'—the basic tools of internal evaluation. Of course, this split is an idealization; what we are dealing with is a continuum: more or less reliance on features of spoken-like vs. written-like language. Lexical choice, by writers as much as by speakers, constitutes internal evaluation. However, a word may be spoken with a certain intonation, tone, gesture, and facial expression that would add to the evaluation, whereas the written word must stand alone.

In the analysis of stories told over dinner, it became clear that the New Yorkers of Jewish background employed more internal evaluation and avoided explicitly stating the points of their stories. Their strategy seemed to be—and this was supported by participants' comments upon hearing the tape, i.e. 'playback' (Labov and Fanshel 1977)—to capitalize upon shared background by not telling the point straight out, simultaneously building upon and reinforcing a sense of 'being
on the same wave length'. The fact that the lack of external evaluation seemed inappropriate to the native Californians can be seen in their on-the-spot reactions as well as their comments during playback. For example, one New Yorker told the following story:

(1) K: I have a little seven-year-old student ... a little
girl who wears those. ........Shé .. is too

(2) F: [She wears those? [chuckle] .
much. Can you imagine? She's seven years old, acc

and she sits in her chair and she goes .... [squeals acc———]

and squirms in his seat.]

(3) F: Oh:: Go::d. ... She's only SEVen?

(4) K: And I say well .. how about let's do sò-and-so. And acc

she says ... "Okay. ... 'Just like that. [squealing]"

(5) F: [Oh:::::]

(6) D: [What does it mean.]

(7) K: It's just so ... 'she's acting like such a little girl

There are two listener/respondents taking an active part in this story. Their reactions are opposite. Frances (F) responds by showing agreement and understanding, not by saying so, but by responding in like style. In (3) she says, 'Oh: Go::d', using exaggerated tone and lengthened vowels, and repeats a part of Kurt's (K's) story in a 'disbelieving' tone: 'She's only SEVen?' Her tone says 'That really is amazing'. In (4) Kurt continues his story, and in (5) Frances again shows understanding by use of a paralinguistically exaggerated response, 'Oh ::::: '. In contrast, David asks (6), 'What does it mean?'

Here is clear evidence, in the text itself, that Frances, who, like the speaker, is of New York Jewish background,
'got the point' of the story. Part of this evidence lies in her responding in kind. Kurt's telling of this 'story' is marked by exaggerated paralinguistic and prosodic features. He uses marked shifts from high to low pitch; speeding up and slowing down; postural and gestural cues. In (1) and (4), he mimics the movements as well as the voice of the girl he is talking about; he places his hands on his knees and squirms in a stereotypically female manner. Frances' response is similar in a number of ways. She picks up on Kurt's words and repeats them back to him, (3) 'She's only SEVen?' with paralinguistically exaggerated phonology. The result is a rhythmically and paralinguistically synchronous and matched speaker/listener interchange.

In contrast, David's question (6) 'What does it mean?' is uttered in flat intonation. Not only does the content of his question make it clear that he does not get the point of the story. In addition, the rhythm and tone of his question are in contrast to Kurt's and Frances' utterances. In playback, David commented that perhaps he did not so much miss Kurt's point as feel annoyed that Kurt had not made it. That is, he felt that the point of the story should be told—in external evaluation. He complained that even in answer to his question (6), Kurt did not tell the point of the story. Kurt's 'explanation' (7) is 'She's acting like such a little girl already'. David commented that 'such a little girl' means to him 'just like a person' or 'grown up', as in 'such a little young lady' as opposed to 'like an infant'. What Kurt meant and should have said was that she was acting like a 'coquette'. David continued that it made him uncomfortable when Kurt squealed and squirmed to imitate the girl's manner. This acting-out of the story seemed to him a breach of good taste.

It is particularly interesting that Kurt, in answering David's direct question, still did not 'explain' the point of the story. I submit that it seemed to him self-evident, as it seemed to Frances.

Thus, Kurt communicated the point of his story through internal evaluation, by presenting the character in a way that seemed to him self-evidently demonstrative of the point. He made much use of paralinguistic and kinesic features—the essence of oral tradition, building upon shared sociocultural knowledge and redundancy of channels. David expected something more like Kay's 'autonomous' use of language, in which the message is carried by and made explicit in words.

Another aspect of cross-cultural differences in storytelling has to do not only with how the point is communicated but what the point can be. Thus it becomes clear that for the New Yorkers of Jewish background, stories were most commonly told to illustrate the speaker's feelings about something. In some sense, Kurt's story is about his feelings about little girls using girly mannerisms. The non-New Yorkers, in contrast, told stories about events in which their feelings were
not only not dramatized but often not expressed. This led to another set of mismatches: the New Yorkers had trouble getting the point of the non-New Yorkers' stories, since they were looking for meaning in the speaker's attitude toward the events.

At one point the conversation turned to a discussion of heredity vs. environment, as exemplified by adopted children. Kurt told the following story, again about a student:

(1) K: In fact one of my students told me for the first time, I taught her for over a year. .... That she was adopted. And then I thought .. ?uh? ... that explains .. so many things.

(2) F: What. That she was —

(3) K: Cause she's so different from her mother

should have been? or stupider than she shouldn't have been. [chuckle]

(5) K: It wasn't smart or stupid, actually, it was just she was so different. ....... Just 'different.

F: hm

The point of the story emerges in the first sentence in which Kurt illustrates his emotional reaction to hearing that his student was adopted in the grunt, 'uh', uttered between two glottal stops, accompanied by a facial expression of surprise. This sense of surprise in effect carries the message that the student was different from her parents, and this had been puzzling to Kurt before he learned that she was adopted. I have suggested (Tannen 1980b) that the questions asked by Frances in this interchange do not show lack of understanding or lack of approval of the way the story is being told. Rather, they function as 'cooperative prompts', eliciting information which Kurt would have told anyway. They serve to encourage him to tell what he was planning to tell—a show of enthusiasm on the listener's part. Evidence for this lies in the fact that the story continues over the overlap of the question; the question does not stop the storyteller or interfere with the rhythm of his story; rather the questions and story continue
in an interwoven fabric of continuous and rhythmically smooth speech.

In contrast, when David tells a story about a child who is adopted, Kurt reacts with a question that interrupts the flow of David's speech and shows Kurt's impatience.

(1) D: My u::m ... my aunt's two kids are adopted, and they were both adopted from different .... famili? different mothers.

(2) K: Yeah. And?

(3) D: And they're just 'different from each other and different from anyone in my family. ....

K hm

They're not like each other at all.

All listeners to the tape of this conversation agree that Kurt's 'Yeah. And?' sounds impatient. David himself, during playback, said that it sounded like Kurt was impatient, and David hypothesized that it was his slower pace that was causing the impatience. Indeed, David speaks more slowly than Kurt, and his hesitation over 'families' vs. 'mothers' creates a stalling in the telling. I hypothesize, however, that another part of Kurt's impatience results from the fact that David has not given any hint of how he feels about what he is telling. The flat intonation is in striking contrast to Kurt's storytelling style, although in terms of actual information communicated in the content, David gives no less information than Kurt did, and both are saying that the adopted children are 'just different' from their adopted families. But in David's story there is no element of his own emotional involvement, as there is in Kurt's. This pattern is not limited to these stories but appears in numerous stories told by members of the two groups.

By focusing on personal emotions, and by using internal evaluation through exaggerated paralinguistic and nonverbal cues, the New Yorkers in this study were using strategies associated with oral tradition. By sticking to events and relying on lexicalization, the natives of Los Angeles were using strategies associated with literate tradition. The effect in communication between members of the two groups was slight mutual impatience and annoyance, and incomplete comprehension. Of course, these phenomena were not gross but comparatively subtle and became clear only after microanalysis. All participants left the gathering feeling they had had a good time, and friendships among them endured. However, the nature of their rapport is certainly influenced by such habitual differences, and consequences of such stylistic
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differences are potentially significant in interaction not favor-
ably biased by ties of friendship and congenial setting.

Conclusion. Kay (1977) suggests that the notion of autono-
mous vs. nonautonomous speech accounts for Bernstein's (1964)
controversial hypothesis of elaborated vs. restricted codes.
Kay writes (1977:22) that

autonomous speech packs all the information into the
strictly linguistic channel and places minimal reliance on
the ability of the hearer to supply items of content neces-
sary either to flesh out the body of the message or to
place it in the correct interpretive context.

I suggest that the addition of background information is a kind
of elaboration. Therefore, autonomous or literate-based lan-
guage is not necessarily always elaborated, nor is oral-based
or nonautonomous speech always restricted. Rather, there is
a difference in which levels of signalling or which aspects of
the communicative channel are elaborated. The use of exag-
gerated paralinguistic features such as pace, pitch shifts,
amplitude shifts, expressive phonology, expressive tone
quality, and so on constitutes elaboration of the paralinguistic
channel. Similarly, the study of conversational strategies
shows that Greeks expected more 'enthusiasm' in expression of
preferences and that Jewish American participants in the
Thanksgiving dinner expected more active listener participation
in the form of expressive reactions, prompting questions, and
mutual revelation of personal experience (Tannen 1979c). This
is elaboration of another sort. In the autonomous or literate-
based mode, the content and verbal channel are elaborated,
while the oral-based strategy elaborates paralinguistic chan-
nels and emotional or interpersonal dynamics.

Two major conclusions may be drawn from these findings.
(1) 'Middle class white' speakers are not a monolithic speech
community. Just as we have come to realize that visible
ethnic minorities have disparate cultural backgrounds and
linguistic norms, so members of middle class white communities
come from a variety of ethnic, geographic, and cultural back-
grounds. If our goal is to understand the speech behavior of
individuals in a multi-ethnic society, we must broaden our
notion of ethnicity. (2) The notion of strategies that have
been associated with oral and literate tradition explains many
of the differences in language use by members of varying
ethnic, geographic, class, and cultural backgrounds. Strate-
gies associated with oral tradition place more emphasis on per-
sonal topics, personalization, and instantiation. There is some
indication, furthermore, that this accounts for some male/
female differences as well. In contrast, those who are accus-
tomed, even in casual conversation, to using conventionalized
strategies influenced by literate tradition are more inclined to
focus on decontextualized content, to expect language to proceed in a linear and logical way, to avoid overlap, and so on.

The consequences of these differences in cross-cultural communication are complex and depend upon the culture in which communication takes place. In communication between members of different cultures, such as nationals of different countries, the mutual stereotyping is likely to be negative both ways. Thus it has been shown (Vassiliou, Triandis, Vassiliou, and McGuire 1972) that Greeks tend to stereotype Americans as cold but organized. This can easily be seen as a consequence of Americans' focus on content, to the exclusion of interpersonal dynamics. In contrast, Americans tend to stereotype Greeks as enthusiastic, spontaneous, but disorganized: a function of their emphasis on the personal and interpersonal. In such settings, each group is convinced that its own norms are based on self-evident assumptions of the qualities of a good person.

The matter is more complicated, however, when communication takes place among people of different cultural backgrounds residing in the same country. Then one set of norms tends to dominate. Those who grow up in a setting in which the norms learned at home are reinforced in the public domain, have attitudes toward their own language that are quite different from those growing up in a culture in which the norms operative at home differ from those endorsed by the society at large. Thus, I found that New Yorkers of Jewish background often were ambivalent about their own speech styles. Those who used strategies associated with literate tradition had a certainty about their convictions. If they proclaimed that it was rude to interrupt or that one ought to state the point of a story, they had no ambivalence about the validity of those values. However, the speakers who tended to overlap in a cooperative way in conversation, on hearing their own conversation on tape, were likely to be critical of themselves. They, too, believe that it is rude to interrupt, to talk loudly, to talk too much. Of course, these negative feelings may be mixed with positive ones: that it is a pleasure to talk to others who talk like them. But at the same time—especially for those who have moved outside homogeneous ethnic communities—they have been influenced by prevalent norms just as much as those who adhere to them. A similar situation obtains for women, in contrast with men.

These are a few of the ways in which an understanding of cross-cultural communication is enhanced by awareness of the oral/literate continuum.

NOTES

1. The summary of research on oral/literate tradition which appears in this paper closely resembles the summary which appears in Tannen (1980a). Here, as there, I thank John and
Jenny Cook-Gumperz for focusing my attention on the importance of this research. I am grateful as well to Ron Scollon for invaluable critical comments and continuing dialogue. Recalcitrant blind spots are mine alone.

2. Such a distinction resembles numerous other theoretical schemata which I do not discuss here, including Hall's (1977) high/low context continuum, field dependency vs. field independence (Cazden and Leggett 1978), and R. Lakoff's (1979) communicative styles camaraderie vs. distance. This last is discussed at length in Tannen (1979c, 1980d).

3. Gumperz and Tannen (1979) present a schema for and discussion of the levels of linguistic signalling at which cross-cultural (social) vs. individual differences occur in interaction.

4. My niece, at age nine, was included in the ceremony at her mother's second marriage. At the critical moment in the solemn ceremony, when bride and groom both sipped wine from a ceremonial goblet, the rabbi offered a sip to the little girl as well. She declined politely, saying, 'No, thank you; I don't drink.' The laughter of the wedding guests and the subsequent legendizing of her rejoinder in family lore served as her lesson that she had used the formula in an inappropriate setting.

5. It was not until very recently that I learned that the habit of saying 'Wear it in good health' to someone who has purchased or received a new item of clothing is not in general use among Americans. It is clear that some of my compatriots share this ignorance and it can be a problem for TV producers. A recent episode of a situation comedy presented a scene, taking place in a Midwestern town, in which a character received a gift in a restaurant. Some nice ladies at a nearby table observed the event and gave their blessing as they left the restaurant: 'Wear it in good health.' Jim Drake, a director for CBS, comments (personal communication) that such linguistic egotism is a problem he and his actors must continually correct.

6. No attempt was made to match socioeconomic status or other variables except age and sex. However, it turned out that socioeconomic status, as judged by father's occupation, did not differ markedly. For a detailed comparative analysis of the Greek and American narratives, see Tannen (1980c).

7. An intriguing question is raised whenever I speak about these phenomena: to what extent are culturally determined or associated styles nonetheless personality features? Surely, I do not believe that ways of talking are 'just style'—hence not evidence of personality features. I hypothesize that members of a group have an array of features from which to choose. Personality and communicative style are intertwined, as Sapir (1958) observed.

8. Here, as always, I must note that 'strategy' does not imply a conscious choice, but merely a way of achieving a conversational goal.
9. Transcription conventions are a combination of my own and many gleaned from the following sources: the Chafe narrative project, University of California at Berkeley; Schenkein (1978); and the Gumperz project, University of California at Berkeley, based on conventions developed by John Trim.

.. noticeable pause or break in rhythm (less than .5 second)
... half-second pause, as measured by stop watch
an extra dot is added for each additional half-second pause, hence .... full second pause, and so on
* secondary stress
* primary stress
italics mark emphatic stress
CAPS mark very emphatic stress
' high pitch, continuing until punctuation
"very high pitch, continuing until punctuation
' high pitch on word
, phrase final intonation: 'more to come'
. sentence final falling intonation
+ arrow indicates talk continues without break in rhythm; see next line
? yes/no question rising intonation
: indicates lengthened vowel sound
p under line indicates spoken softly
acc under line indicates spoken quickly, continuing until punctuation unless otherwise indicated
? is the traditional linguistic symbol for glottal stop, as in the expression of warning, 'uh 'oh
[brackets] indicate comments on nonverbal characteristics
penned brackets on two lines indicate overlapping speech.
Two people talking at once.
penned brackets with reversed flaps indicate latch
Second speaker begins without pause following first speaker's utterance.

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CROSS-CULTURAL COMMUNICATION
IN THE CLASSROOM

Muriel Saville-Troike
Georgetown University

If bilingual/multicultural education is to succeed either in cultivating understanding and respect for social and cultural diversity, or in providing truly equal learning opportunities for students from diverse sociocultural backgrounds, it must be essentially concerned with diversity in language form and use. This is true because language includes among its functions those of serving as a symbol and identifier of group membership and as the principal medium for mediating and manipulating social relationships. Language is unique in its dual role as an intrinsic component of culture and as a medium through which other aspects of culture—including the content of formal education—are expressed and transmitted.

In the identification function, speaking different languages is an obvious marker of differential group membership. By switching languages, bilinguals often have the option of choosing which group to identify with in a particular situation, and thus convey the metaphorical meaning which goes along with such choice as well as whatever denotative meaning is conveyed by the code itself. An example of such metaphorical switching was reported by a student here from Nepal who used three different languages when being questioned by a border customs official: first Hindi as a 'neutral' code for providing information, then English to convey an educated and elite social status when excess tea in her baggage was questioned by the guard and black-marketing motives implied, and finally her native language for 'solidarity' with the guard when he was recognized (because of his accent in Hindi and English) as belonging to the same ethnic group. Bilinguals in the United States frequently use English (even with other speakers of their native language) in formal situations and to convey distance or status, but switch to the other language to express 'solidarity' or ethnic identity.
Diversity of language within a single speech community, such as English or Spanish, also provides a great deal of information about speakers' social identities, and even monolingual speakers (consciously or unconsciously) employ metaphorical switching between regional or social varieties or stylistic registers of the language to signal their role in a particular situation, their relationship to those they are speaking with, and the group identity they wish to convey.

On the receiving end, hearers of English (and other languages) regularly use language variables as a basis for judging others' social background, prestige, and even personality characteristics, as well as their ethnicity. Such concepts as status and role are not permanent qualities of language itself but abstract communication symbols which are always perceived in relation to a particular social context. Children may be characterized as 'good' or 'bad' at least partly in terms of their language use, including not only the employment of politeness rules and 'proper' vocabulary, but even features of pronunciation; e.g. English-speaking children who pronounce coming as 'comin' are judged less well behaved or intelligent than those who say 'coming' (Fischer 1958). Perceptions of individuals as 'voluble' or 'taciturn' are always in terms of cultural norms, and even expressions of pain and stress are culturally patterned—children in an English speech community learn withdrawal or anger, in Japanese nervous laughter or giggling, and in Navajo silence.

Conflicting attitudes toward language diversity create one of the greatest problems in cross-cultural communication between teachers and students (or their parents), and misunderstandings often occur for this reason. When the differences are understood, they may be used as an educational base; when they are not, they create a formidable barrier to learning. Contributing to an understanding of language diversity (not only in form, but in patterns of use) would clearly be one of the most important possible contributions of bilingual/multicultural education.

No complete inventory exists of different social rules for language usage or of different attitudes toward language even within the United States, but we can think of many examples. One is the difference in voice volume or level normally used by some Native American groups, with Indian students interpreting the non-Indian teachers' louder level as anger and hostility and the teachers interpreting the students' softer level as shyness or unfriendliness. A student who looks directly at the teacher when talking or listening is considered 'honest', 'direct', 'straightforward' by most Anglos and as 'disrespectful' by many Mexican-Americans, blacks, and Indians. The student who averts his eyes would be considered 'respectful' by the latter and 'shifty' or 'dishonest' by many Anglos.

The standard middle-class English speech patterns presented as a model in school are likely to be considered effeminate and
thus rejected by lower class boys approaching adolescence, especially since these patterns are used by female teachers. The English of male teachers or of older boys would be much more likely to be adopted by boys wanting to establish a male identity. Studies of the acquisition of English by Puerto Rican adolescents in New York and Mexican-Americans in Chicago document that the variety being learned and used is not the language taught in English classes, but the language of the dominant peer group in the communities—which in these cases is Black English (Wolfram 1974). Even very young children are aware of the function of language in establishing group identity, and use the appropriate variety to identify with friends. One of my former kindergarten students developed a lisp when a best friend lost his front teeth, and many middle-class Anglo parents found during the early years of integration in Southern states that their children were adding the nonstandard forms of some black and Spanish-speaking classmates. (Middle-class black parents were often distressed that their Standard English-speaking children were being influenced by the nonstandard speech of lower-class white students.)

Classroom interaction is also affected by language diversity, including sociolinguistic rules regarding who should talk and when. The school supports the convention of talking one at a time (after raising a hand and being called on) and not interrupting; other cultures would consider that rude, a sure sign that no one was interested in what the primary speaker was saying. Some cultures feel it is inappropriate for children to talk at all in the presence of adults, and others that it is inappropriate for women to talk in the presence of men.

Mitigation techniques also differ, and students encounter many problems in our schools when they come from cultures that do not use the same ones that are accepted there. A middle-class student from the dominant culture has learned to avoid unpleasant assignments with such indirect excuses as I'm tired. Can't I do that later?, or by nonverbal dawdling or day dreaming until the time is up. While often unsuccessful, the attempt brings no serious reproof. If a student has not learned these cultural strategies and says, No, I won't, or just No—which have essentially the same meaning—he or she may be considered belligerent or rude.

Language learning for children is an integral part of their socialization; learning language is also part of learning to be a boy, or a girl, or rich, or poor, or black, or white, or Chinese, or Basque, or Chicano, of dozens of other social roles into which the children are being encultured. Children learn the social structure of their culture as they learn language, and learning to use appropriate linguistic forms when there is a choice is part of learning one's place in society. The set of sociolinguistic rules learned first through family interaction, then peer group and wider community, involves age, sex, and
social class, as well as ethnic group and larger societal memberships.

Understanding the roles and identities which others have in the larger society thus minimally involves understanding how language diversity functions in manipulating and maintaining role-relationships, as a boundary marker between social groups, and as an instrument of social change. Ideally, such understanding in the context of multicultural education will also involve the following factors.

First, it will involve making use of students' native languages as a medium of instruction and assessment. When the educational context is one in which students understand little or no English, this is considered essential by proponents of bilingual education; students who cannot understand the language of instruction clearly cannot learn effectively, and instruction or support in their native language is widely accepted as necessary if they are to have equal opportunity for education.

Second, it will involve accepting and accommodating the students' language and cultural patterns of language use. The teacher, indeed the whole educational system, should seek to expand and enrich the existing repertoire of teaching styles and instructional activities to provide for the linguistic diversity of students. This is important not only when students speak languages other than English; the essence of the 1979 court decision against the Ann Arbor schools was that although students speaking 'Black English' and their teachers could understand each other, lack of acceptance and accommodation to the language differences resulted in unequal educational opportunity, in violation of the students' constitutional rights (Center for Applied Linguistics 1979).

Third, it will involve teaching about important and useful components of English and other languages of instruction as they are used in school and in other interactional contexts within American society and an even wider societal context. Students should learn to expand and enrich their repertoire of language-related knowledge, skills, and behaviors, and extend their linguistic and cultural competence. A traditionally recognized function of the school is to 'prepare youth for life'. However, schools have always taken a very narrow view of language as it relates to this function. Only a single 'brand' of language--middle-class formal--has been recognized as legitimate, with bilingual education too often interpreted as the same 'brand' of two languages. This attitude and the language methods which implement it contribute little to fluency in use of sociolinguistically appropriate styles in various contexts.

The need to take language differences into account is quite obvious when teaching students with limited English proficiency, but accommodation must also be made to social and cultural differences among fluent, even monolingual English speakers. All multicultural education involves cross-cultural
Students may differ in their willingness to ask questions or volunteer information because of cultural differences in the appropriateness of these language behaviors. Teachers should both use and allow a variety of procedures, and be sensitive to which procedures are appropriate for which students, and to which differences in behaviors are due to cultural differences between groups and which to individual personality factors. Many students have been incorrectly stereotyped as 'shy' because the teacher was requiring inappropriate behavior (from the perspective of the students' native language and culture). At the same time, students should be taught, at least by the secondary level, that asking questions and volunteering information is not considered inappropriate or overly aggressive in school, but rather is valued, and often rewarded with a higher grade. Teaching this, and guiding students to behave accordingly, is part of developing the language competence required in school.

Other language-related classroom procedures and behaviors may need to be explained or taught, including some which generally operate below the level of consciousness. We already recognize such behaviors as walking in line, or raising a hand to talk or ask permission to go to the bathroom, as unique to the subculture of the school, and therefore we formally teach them. But many students will also not know the more subtle sociolinguistic rules which are appropriate for school, and these, too, should be made the subject of explicit instruction. These include recognition of indirect instructions and commands, means of verbal mitigation, or even how to prevaricate acceptably or to respond to recognized prevarication. These patterns can be and should be taught as part of teaching school languages.

For older students, instruction in use of appropriate language styles and routines in various practical settings (job interviews, telephone communication, information-seeking procedures) can be an important part of their 'preparation for life'. In the adult world, judgments are continually being passed on people on the basis of their use of language. The ability to style-switch appropriately in different situations, and with different audiences, is a skill which should be recognized and consciously taught to the extent we can do so. Students from different cultural and linguistic backgrounds, including non-mainstream English backgrounds, need at a minimum to know how various linguistic behaviors are perceived and interpreted in the mainstream English-speaking community.

This knowledge needs to be imparted in as objective and sensitive a manner as possible. All instruction should begin with the premise not only that the native language is a valid medium of communication and instruction, but that the language variety spoken by the student is intrinsically as good and valid as the variety which is being taught. Because Standard English is the medium of communication in the larger society,
as well as the language of social control, of art, of philosophy, of human services, and of technological development in the United States, competence in its use is of great potential instrumental as well as humanistic significance, but it is no automatic panacea, and false promises or implications should be avoided. Lack of control of Standard English may leave one vulnerable to social and economic exploitation, but American history is replete with counter-examples of nonstandard-speaking leaders of industry and labor, and Ph.D.'s--some in linguistics--working as waiters and clerks. Whitney Young summed up the issue perhaps most succinctly when he once said, 'I would rather say "I is rich" than "I am poor"'.

When language itself becomes a focus in the instructional program, as it does in bilingual programs, it may be the case that the effect of a program results more from the affective impact of using the students' language than from the purely cognitive benefits (though both are surely relevant). Research has shown that students who attend school in their native countries (e.g. Mexico) for several years before coming to the United States tend to do better in English than those who begin school here (Kimball 1968; Troike 1978). In other words, the schools here are at least partly responsible for retarding the students (the alternative explanation—that schools elsewhere are better than United States schools—is unlikely).

The cause of the retardation is to be found both in the school and outside. Where schools have hired members of the students' ethnic group as regular teachers and administrators, and have developed a strong academic program which respects, utilizes, and builds upon the students' native language and culture, achievement has exceeded national norms in English reading and mathematics. Where the school has hired staff from the minority group only in subordinate positions, or not at all, and has given only lip service to the more superficial aspects of the group's culture--food, dress, holidays--the reality of social inequities beyond the school has been telegraphed to minority students, whose achievement has been depressed accordingly. In this context, even the use of the native language may have little positive effect (Cohen 1979).

Social attitudes may thus play a powerful part in determining levels of success in language learning. In Sweden, where Finns are looked down upon and disparaged, Finnish children have great trouble learning Swedish and do poorly in school (Skutnabb-Kangas and Toukomaa 1976). In Australia, on the other hand, where Finns are admired and respected, Finnish children usually learn English and do well in school (Ipola 1979). The 'Pygmalion effect' often manifests itself in our own schools, where Chinese students are expected by teachers to do well, and Hispanic or Filipino students are expected to fail--and the expectation becomes a self-fulfilling prophecy.

Since language is such a powerful symbol of personal and group identity, direct and indirect attacks on it in the
classroom and outside are attacks on the students' own identities and their perception of self-worth and the worth of family, friends, and others they admire. Direct attacks may take the form of prohibition on the use of another language, or public corrections of the form of a student's speech. Indirect attacks are often subtle, and may range from omissions of the students' language from public use (on signs, in announcements, etc.), to disparagements of its expressive power, negative evaluations of the intelligence of its users, failure to utilize it in testing or making home contacts, or restrictive pressures on its use by staff. Even where the students' language is incorporated into the curriculum, books and materials used may have an inferior appearance to the English materials, again betraying a second-class status for the other language, and by extension, for its speakers.

Education of one kind or another is always going on in the classroom--students are always learning something, whether it is what the teacher intended or not. It follows that education may be either positive or negative, and that what students learn from school may be beneficial or detrimental. Although prejudice and ethnocentrism may not be explicitly listed as objectives of the curriculum, they may be unconsciously transmitted just as surely as if they were. While minority students are learning to disvalue their language, their culture, and their social group, the majority students are likewise learning to disparage their fellow students and to believe in the inferiority of the minority language and culture, and the inherent superiority of the majority culture and its linguistic medium, Standard English. Such beliefs, though founded in ignorance, become deeply engrained to the point that they acquire an almost religious tenacity, and become the basis for perpetuating inequities and inequality of educational opportunity.

While schools and teachers have understandably focused much of their attention on raising the achievement level of minority students (sometimes at the expense of the students' language or culture), helping nonminority Standard English-speaking students develop an understanding of the nature of language and linguistic diversity should also form an important part of the educational program. While the school must prepare students for coping with the society into which it is graduating them, it can and should contribute to improving the society of the future as it prepares today's students to become tomorrow's adults. Mirabeau B. Lamar, President of the Republic of Texas, said that 'An educated mind is the guiding genius of democracy'; teaching respect for linguistic diversity so that it comes to be considered a characteristic of the educated mind can thus form a major contribution of bilingual/multi-cultural education to preserving the future of American democracy.
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