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THE ROLE OF THE RESEARCHER IN BILINGUAL EDUCATION: PERSPECTIVES FROM CONNECTICUT

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Abstract

During the past few years, there has been an increased level of understanding about the Puerto Rican student population in bilingual education programs in Connecticut. The data come from two sources: (1) basic research studies conducted on the cognitive, linguistic, academic, and social correlates of development in these youngsters conducted by Hakuta's research group at Yale University in collaboration with the New Haven Public Schools; and (2) rigorous evaluation studies of bilingual programs conducted by the Connecticut State Deparment of Education, using both traditional quantitative methods as well as more innovative qualitative ethnographic procedures. In part because of the small size of the state, there has been close communication between these two groups as well as with other school districts around the state. The presentation will give a summary of the findings, and focus on the nature of the collaboration that has emerged, particularly with respect to the ways in which the findings have been used to guide policy.

It is a great privilege to be part of a small group of "outsiders" participating in this conference of California "insiders" who work in the area of the education of linguistic minority students. We would like to present some perspectives from a state that is considerably smaller than California. Size aside, in Connecticut, many of the issues are quite different from those found in California. For example, the ethnolinguistic composition is different, and the laws governing bilingual education are different. Yet we hope to compare notes with you on mutual concerns of all those interested in the convergence of researcher and practitioner perspectives. Besides, neither of us are totally unfamiliar with California. The first author, Prince, has evaluated bilingual education programs in the state and received her graduate training at Stanford. Hakuta, aside from many professional visits to California, will be joining the UC system in July of 1987 on the Santa Cruz campus. We feel quite enfranchised in the California system and concerns.

In this paper, we will present what we hope will be interesting and informative personal perspectives from two researchers who come from different training and professional contexts. In the first part, Hakuta, whose research is primarily in the area of psycholinguistics and cognitive development, describes the way in which his research program led into increasing involvement with educational and policy issues. In the second part, Prince, who received her training in bilingual education and the ethnography of language, describes her rare position as the evaluation specialist for bilingual education in the Connecticut State Department of Education, rare in

the sense that ethnographers and their qualitative tools are seldom found in the world of evaluation dominated by a press for bottom-line summative and quantitative treatments of programs. In meetings such as this one, we believe that a major function is to construct useful metaphors for the interaction between research and practice, and we hope that our candid discussion can help towards the creation of alternative constructs.

For expository convenience, we will be using the first person singular for each section, the referent of the pronoun being the appropriate author. The New Haven perspective is Hakuta's, and the state evaluation perspective is Prince's. By way of explaining the differential level of contribution, Hakuta's section is shorter because he had the privilege of sharing many of his views with this same audience in last year's conference, and therefore has less new information to convey.

Perspectives from a Researcher in the New Haven Puerto Rican Community

As a researcher with training in experimental psychology, considering my current interests in bilingualism and bilingual education, I am judged at times to be an oddball. It is not uncommon to be asked (tactfully phrased, of course) by colleagues who are familiar with my earlier interests a question that is the researcher's variant on the old question: "What's a nice boy like you doing in a place like this?" One simple answer, of course, is to claim that I have not in fact changed interests. Rather, I am investigating the

same sorts of haughty and scientifically respectable questions that I used to ask, but with more diverse populations. Another answer is to say that I have lost patience with scientific pursuit that is totally removed from social concerns. Both these answers contain a grain of truth, but reality is considerably more complex and perhaps more instructive than these glossy answers. I believe that my delving into the bowels of bilingual education has helped greatly enrich my understanding of the need for interdisciplinary inquiry, and as a researcher, I am so much the wiser. As an added bonus, my work has been of some use to the practitioner, a fact for which I am grateful.

When I first started my research on bilingualism in New Haven, my perspective was almost purely that held by an acontextual experimental psychologist. By acontextual, I do not mean that context was irrelevant, for all human activity occurs in a context. Rather, I was primarily interested in finding out about principles of linguistic and cognitive organization that are robust across different settings and different kinds of individuals. Over time, as I became more interested in the issue of bilingual education both at the local and national levels, I became increasingly aware of the importance of context, particularly as it relates to the interpretation of research findings. So, my part of the presentation gives a rather personal perspective on the changes in my (a researcher's) outlook and how it came about as the result of interaction with the local school system and its people.

Conducting research about bilingualism in a transitional bilingual education program forces one to face a curious paradox. The short-term goal of transitional bilingual education programs may be to make children bilingual by teaching them English while providing content instruction in the native language. Yet in terms of long-term goals and the implementation of the programs, the misnomer of bilingual education is clear, for the programs aim exclusively at creating monolingual English children.

In our research, conducted in collaboration with Rafael Diaz (now at the University of New Mexico at Albuquerque), we were interested in providing a rigorous test of a line of research pioneered by Elizabeth Peal and Wallace Lambert at McGill University in 1962. What Peal and Lambert and a good number of subsequent researchers showed (reviewed in Cummins 1976 and Diaz 1983) was that in conditions of additive bilingualism -- that is, where the second language is developed without fear of loss of the native language -- bilingualism had a positive association with a variety of cognitive and linguistic skills. Other studies of bilingualism where negative relationships were found were conducted primarily in conditions of subtractive bilingualism, where the second language replaces rather than enriches the native language. In our study, we essentially found the same pattern of results as those found in studies of children in additive bilingual settings. Children who were more bilingual did better than children who were less bilingual on a number of nonverbal and verbal tests of cognitive skill (Hakuta & Diaz 1984; Diaz 1985; Hakuta in press). Furthermore, in the study we found an increasing

correlation between English and Spanish over the three-year period of the study, indicating that the two languages were not competing but rather complementing each other, as suggested by Cummins (1984).

The basic facts of the study are undeniable. It served to dispel many of the myths surrounding bilingualism, and added to the growing body of cognitive-level research that supports the fundamental tenets of bilingual education (these arguments were summarized in my talk here last year). However, in interpreting our findings, several societal level facts had to be considered as well. First, there was the incongruity between additive and subtractive bilingualism. The students in bilingual education programs find themselves at least temporarily in an additive bilingual setting (at least, this is true in New Haven where most teachers seriously perform the native language instruction component). Yet the overall long-term goal is strictly transitional, where the native language is not valued (witnessed by the lack of commitment to offering courses in Spanish for native speakers), and a considerable number of teachers even in the bilingual programs are not fully bilingual themselves, thereby denying students good bilingual role models. A second fact to consider is that students in the bilingual program where we conducted our research were not fully representative of the Puerto Rican population in New Haven. Presumably most of this population is bilingual to some extent, and yet our study only addressed bilingualism among a particular sector of the population, i.e., those found in the bilingual programs, and thus by definition, of limited English proficiency. A third fact is the

natural correlation between bilingualism and a variety of societal background factors. In our initial study, we tried our hardest, as do most current studies of bilingualism and cognitive skill, to rule out the natural correlation between bilingualism and demographic characteristics. Yet we were beginning to suspect that we were being too "cognitive" and "acontextualistic" in our endeavor. By doing everything we could to eliminate (through research design and through statistical controls) the confound of bilingualism with societal factors, a strange feeling descended upon us that we were throwing the baby out with the bathwater. Perhaps by only trying to establish a link between bilingualism and cognitive skills, we were only looking at a very incomplete picture (a point argued in technical detail in Hakuta, Ferdman & Diaz 1987).

Thus, we spent considerable effort conducting a study (Hakuta & Ferdman 1984; Hakuta, Ferdman & Diaz 1987) trying to look at the sociolinguistics of language use in the New Haven Puerto Rican community. Our survey, crude as it was, revealed an unmistakable pattern of subtractive bilingualism in New Haven. English and Spanish were both used in most households, but there was a distinct subtractive relationship between them, associated with increasing length of residence on the mainland United States, mobility patterns, parental education, and many measures of social upward mobility. Not surprisingly, the students in our original study from the bilingual programs were from quite different home backgrounds than were Puerto Rican students in the mainstream classrooms. Clearly, bilingualism in individual children is not a causal

factor in the development of cognitive skills, but rather woven into a complex mosaic, where in large part, the bilingualism is itself the result of larger, macro-level socioeconomic and demographic forces.

Having come to a better understanding of the landscape of bilingualism in the New Haven Puerto Rican community, I returned to the study of the cognitive processes underlying bilingualism with renewed vigor. Our current research is looking at several ways in which the two languages of the bilingual might be seen in a positive light. I am not ashamed to say that the subtractive pattern of bilingualism in the New Haven Puerto Rican community does not accord well with our philosophy. Philosophy aside, it would also be foolhardy to allow the Spanish of Puerto Ricans, who are U.S. citizens but many of whom will return to their native Puerto Rico where Spanish is almost exclusively used, to atrophy in the community.

In one study, we have been looking at the extent to which skills developed in Spanish subsequently transfer to English. What we are saying is that instruction in the native language should be seen as an important ingredient of the academic development of the students, even if the goal of the program might be the development of English. Specifically, in first grade bilingual students, we trained students selectively to develop metalinguistic awareness on spatial (e.g., sobre, alrededor) and temporal (e.g., antes, despues) terms, and subsequently assessed the extent to which this training helped accelerate the learning of the equivalent concepts in English (e.g., on, around, before,

after). What we have found, according to our preliminary analyses (Hakuta & Rodriguez-Lansberg 1987), is that there is transfer from the native language instruction to English.

In another study, about which we are extremely excited, we are looking at the characteristics of translation and interpretation skills in fourth and fifth grade children between English and Spanish. What we enjoy most about the findings so far is that the children are very skilled at the task, and almost without exception make no errors of language confusion. This evidence itself is one of the best arguments against the view of code-switching as language confusion. Also, we find evidence that translation and interpretation are skills on which individuals vary. We have found that in addition to level of proficiency in English and Spanish, there is a separate factor that affects performance that we suspect might be something like a "translation and interpretation proficiency" (Hakuta & Malakoff 1987).

In both of these examples of more recent research, it should be pointed out that the ideas were generated and developed through close interaction with teachers, and both were designed to answer the question of the ways in which the roles of the two languages of the bilingual could be understood in a positive way. They both also have certain pedagogical implications. In the first study, the implications are that strengthening instruction in the native language in the early grades should be seen as a priority even in the development of English language skills. In the second study, we are beginning

to develop curriculum with some middle school Spanish teachers over the summer to teach translation and interpretation skills as language arts enrichment, and of course, to provide a strong incentive for the students to maintain their Spanish.

In what ways has this research impacted the practice of bilingual education in New Haven? I would say indirectly, but in a significant way. The best way to describe my interaction with the bilingual educators in New Haven is as sheer contact and familiarity, boring as these might be as factors. Last year at this conference, I suggested a simple-minded if at least realistic version of the relationship between researcher and practitioner. I suggested that both researcher and practitioner are in search of metaphors for how to characterize the linguistic minority students, and argued that it is something like bonsai-making. Neither researcher nor practitioner has a privileged pipeline to reality. Like bonsai makers, they are involved in an attempt to create a microcosm of nature, which necessarily involves an interpretive component. My role as a researcher in New Haven has been to construct a bonsai that tries to see the two languages of the bilingual as a resource instead of a handicap to be overcome, and to understand the ways in which this phenomenon is distributed in the population.

It is instructive to think about the way in which the bonsai idea works in reality. Several years ago when we reported our findings on the positive association between bilingualism and cognitive skills, we were deluged by

requests for information about the study. In general, the inquiries were from bilingual educators, and they had heard about our study that "showed that bilingual education works." "No, I would tell them, the specific study did not address the question of the effectiveness of bilingual education. Rather, we only looked at whether bilingualism, not bilingual education, was positively or negatively related to cognitive development. We happened to address this question empirically with students who were in a bilingual program in New Haven. However, the fact that bilingualism showed a positive relationship with cognitive ability does not mean that bilingual education has been proven effective." Despite my qualifiers, the reaction to our specific studies in New Haven by advocates of bilingual education has been enthusiastic, and the findings are often taken as evidence for the effectiveness of bilingual education.

From the bonsai perspective, this reaction to my study makes sense. As far as practitioners are concerned, my construction of bilingualism comprised a vision of bilingualism that they philosophically agreed with, i.e., that bilingualism is to be valued, and that native language instruction should not be seen as hindering the development of English nor of general cognitive development. Thus, it is not really important whether my study actually looked at the effectiveness of bilingual education. Rather, the practitioners and I ended up with a shared vision of bilingualism, and this concensus of a vision, in turn, has enabled us to use each other as mutual resources on various projects. The bottom line for me, then, is that researchers must

learn to become "insiders" to the problems and preoccupations of educators, and practitioners must also learn to become "insiders" to research and to aggressively suggest avenues for investigation.

Perspectives from a Researcher at the State Department of Education

During the remainder of this paper I will present a slightly different perspective on the role of the researcher in bilingual education from my vantage point as the state evaluator of Connecticut's bilingual education programs. Like Hakuta, I, too, am an anomaly of sorts, since state departments of education typically do not employ ethnographers to evaluate their programs, especially programs where the political clamor for cold, hard, quantifiable data is as great as it is in bilingual education. My position at the State Department of Education can best be described as that of a language planner, whose role is to advise teachers, administrators, state education officials, and legislators on a variety of language-related educational issues.

The role of a language planner and researcher at the State Department of Education entails three major responsibilities. The first is to ensure that policy decisions which affect the education of limited English proficient children are not in conflict with basic research findings. Because the field of bilingual education is still relatively young, a good deal of basic research on language acquisition and the transfer of skills is still evolving. This research lag clearly puts policymakers at a disadvantage,

because decisions must often be made "in the dark" on issues such as student testing and placement, teacher certification, and criteria for entry to and exit from bilingual programs. Policymakers can not always wait for basic research to supply the necessary answers to complex questions such as "How can one best measure proficiency in a second language?" Instead, policymakers must use the best information currently available to them when setting educational standards.

If state policies do conflict with basic research findings, it is my responsibility to see that they are brought into alignment. For example, previous state regulations allowed a student to exit a bilingual education program in Connecticut on the basis of the results of a structured oral interview and a passing score on an oral English proficiency test, both of which tap surface-level, Basic Interpersonal Communication Skills, or BICS (Cummins 1981). Since these surface-level language skills have been found to be poor predictors of academic success in all-English classrooms, a recommendation to change the exit criteria was submitted to the State Board of Education. The revised exit criteria place a greater emphasis on English academic indicators such as standardized test scores, grades, reading levels, and writing samples, all of which measure Cognitive Academic Language Proficiency, or CALP (Cummins 1981), and which have proven to be far better predictors of a student's ability to perform successfully in an all-English setting.

My second major responsibility as a language planner and researcher for the State Department of Education is closely related to the first -- not only must I ensure that language policies do not conflict with basic research findings, but I must also ensure that key players understand the research findings so that they can plan the most effective educational programs possible. Key players at the local level include teachers, principals, bilingual directors, school board members, and superintendents, and at the state level they include the Commissioner of Education and members of the State Board of Education. Other key players who influence educational policy and practice include the media, legislators, and the general public, and a great deal of time is often devoted to clearing up firmly entrenched misconceptions held by these players about language learning and bilingual education. Some of the most common misconceptions concern the length of time children need to learn a second language, the relationship between achievement in a second language and the extent to which academic skills have been developed in the first language, and the effects of student characteristics such as poverty and mobility on language learning and academic progress.

My third responsibility as a researcher at the State Department of Education is to conduct evaluation research studies using Connecticut's own students and teachers in order to improve the quality of the state's bilingual education programs. In the past the primary purpose in evaluating the state's twelve bilingual education programs was simply to monitor student acquisition of basic skills and oral English proficiency. This information was provided

to state officials to determine whether program participants were acquiring English skills successfully. In keeping with this monitoring role, a statewide evaluation of bilingual education was designed several years ago which is primarily summative, emphasizing program outcomes. The evaluation is also primarily quantitative, analyzing student gains in reading, mathematics, language arts, and oral English language proficiency between yearly pretests and posttests. Information is also collected on the number of students exiting the programs, the amount of daily native language instruction, and the length of time students have been in the programs. To date, two statewide evaluations have been conducted, in 1984-85 and in 1985-86.

Most evaluations of bilingual education programs use this traditional method of assessment, and results obtained from this type of evaluation are often used to determine whether the programs should continue to be funded. However, such a traditional approach may produce inadequate, or even inaccurate, information if interpretations of the results do not take into account the characteristics of the students served, the settings in which the programs operate, implementation problems which the programs face, or measures of success other than standardized test scores. Moreover, these types of "short term, one-year-at-a-time evaluations" neglect to show the cumulative effects of bilingual instruction across several years of program exposure (Troike 1978).

These weaknesses are not uncommon, as Hakuta (1985:1) has pointed out: "Most evaluations only tell us whether programs work or do not work, rather than why they may or may not work." Explaining why programs work requires a different type of approach which focuses on program processes, which looks at measures of success other than test scores, which follows student progress over a period of several years of program participation, and which documents the context in which the programs operate. In short, ethnographic studies are required.

Of course, ethnographic research and evaluation studies can not be institutionalized in the same way that traditional evaluation studies have been. That is, the state can not simply request that districts submit ethnographic data at the end of the year in the same manner in which they submit test scores. The researcher's role is critical in the design and implementation of this type of evaluation, and one of our purposes in writing this paper is to share the first-year results of the Connecticut State Department of Education's first ethnographic study, of reading and writing instruction in three bilingual education programs.

An Ethnographic Study of Reading and Writing Instruction

The ethnographic study of reading and writing instruction was designed to identify characteristics of bilingual education programs which contribute to program success, so that program strengths could be replicated in other

schools and program weaknesses could be corrected. The study was conducted in three elementary schools in three large, urban school districts in Connecticut, where approximately 75% of the state's limited English speakers are concentrated (Prince 1987). Spanish/English programs were selected, since 93% of the limited English proficient students in Connecticut are Spanish speakers, and first- and second-grade classrooms were selected because it is at this level that critical decisions about reading are usually made (such as which language to use for initial reading instruction), and because over half of the students enrolled in Connecticut's bilingual education programs are in the early elementary grades (K-3).

Since the intent of the study was to identify program characteristics which contribute to success, it was logical to choose a sample of schools where the bilingual education programs appeared to be working particularly well. Therefore, the schools were chosen according to criteria similar to those used by Tikunoff (1985) in his studies of Significant Bilingual Instructional Features -- each school was nominated by the bilingual director in the district as having a particularly successful bilingual education program. Eleven first- and second-grade classes in these schools were visited twice a month from March to June of 1986. During these visits the researcher observed instruction, interviewed teachers, students, and staff, examined curricular materials, and collected student writing samples in order to construct descriptions of the bilingual education programs in each school, particularly the reading and writing components. In order to focus classroom

observations on the most salient features of program operations, a qualitative framework which covered three areas of inquiry (Curriculum, Instruction, and Program Administration) was adapted from Cohen (1980), Spencer and Valencia (1982), and Tikunoff (1985). This framework appears in Table 1.

The Evaluation Context

According to data compiled for School Year 1984-85, 165 local public school districts operate in Connecticut, serving close to one-half million students in Grades K-12 (Connecticut State Department of Education 1986). One-fifth of these students are racial and ethnic minorities; 8.6% are linguistic minorities. Eighty-three different languages are spoken by limited English proficient students in the state, and bilingual education programs are offered in eight (Spanish, Portuguese, Laotian, Vietnamese, Cambodian, Italian, Polish, and Haitian Creole).

Hispanics, primarily Puerto Ricans, comprise the vast majority of non-English speakers -- the most recent U.S. Census figures (1980) show that 35,000 Connecticut children between the ages of five and seventeen come from homes where only Spanish is spoken (Connecticut State Department of Education 1985). In addition to being the largest language minority population in Connecticut, Hispanics also represent the fastest growing population group, and their percentage of total school enrollment is expected to increase

TABLE 1

Qualitative Framework Used to Evaluate Reading and Writing Instruction in the Bilingual Education Programs

Curriculum

(1) Is a formal reading and writing curriculum available? If so, is this curriculum comparable to the one used in non-bilingual education classrooms?

(2) What materials are being used in each language to teach reading and writing? Are ample materials and resources available?

(3) Are the materials for teaching reading and writing equally good in both languages?
   (a) Have they been equally well field-tested?
   (b) Do both provide equally good systems of informative feedback for students?
   (c) Do both contain equally interesting stories?
   (d) Do both review previous material to reinforce vocabulary and structures?
   (e) How do they compare on the sequences or concepts covered?

(4) How much time is allocated for reading and writing instruction in the native language? In English?

(5) On what bases are decisions made to test students in English reading or in native language reading each year? Do the tests which are used match the curriculum which is taught?

Instruction

(1) In which language did the students begin reading? What was the rationale for this decision?
   (a) Primary language?
   (b) English?
   (c) Both simultaneously?

(2) How are instructional objectives in reading and writing set?

(3) How do teachers assess student progress? What are the indicators of achievement in reading and writing in each language?

(4) Is there a particular reading method or combination of methods being used for teaching reading in each language? (For example, the language experience approach, the phonetic approach, the basal reading approach, etc.)

(5) Do students at a particular grade or grouping all use the same book? Do they progress at the same or at individualized paces? How are they grouped for reading instruction?

(6) On what bases are decisions made to transition students from native language reading instruction to English reading instruction?

(7) Who is responsible for providing English and native language literacy instruction? Is individual support available? Peer tutoring? Are aides' lesson plans coordinated with the teachers'?

(8) Is there evidence of "active" teaching?

(9) Does the teacher alternate between languages if appropriate?

(10) Does the teacher integrate English language development with the integration of academic skills?

(11) Does the teacher know, understand, and use the child's cultural background to improve instruction?

(12) Do teachers hold high expectations?

(13) Do teachers attempt to analyze why learning does not occur?

Program Administration

(1) Are bilingual children accepted or are they viewed as a separate group within the school?

(2) Is the principal able to articulate and demonstrate a strong commitment to the bilingual program?

(3) Are regular classroom teachers able to describe and demonstrate that they support the bilingual program?

(4) Is the native language displayed visually in the classroom? In the school?

(5) What types of training (formal and informal) have staff received in reading and writing instruction and in bilingual reading and writing methodology?

(6) Does the school employ a reading specialist? If so, are his or her services available to the bilingual education program? Are other support services which are available to children in all-English classrooms (e.g., Chapter I tutoring) also available to students in the bilingual program?

dramatically by the end of the century. Between 1970 and 1985 alone, Connecticut's Hispanic population nearly doubled (Connecticut State Department of Education 1985).

The three districts which were chosen for this study are all located in large, urban areas of Connecticut, with a mean estimated 1984 population of 134,016. Although Connecticut has the highest per capita income in the country, the disparity between rich and poor is enormous. The three cities which house the school districts under study have some of the highest rates of child poverty in the nation, ranging from 41.1 - 52.1% (Connecticut State Department of Education 1986). Community data compiled by the Connecticut State Department of Education for School Year 1984-85 (see Table 2) revealed that the average per capita income and median family income in three of Connecticut's wealthiest communities are approximately three times as high as the averages for the three cities under study. Roughly one-third of the families in these cities live below the poverty level and half of the children live in single-parent homes. The level of education attained by adults in these cities is also considerably lower than the levels reported in other areas of the state.

Table 3 presents similar school district information for these three cities. Average minority enrollment in these districts is 83%; one-third of the students speak a non-English home language and almost half are economically disadvantaged (Connecticut State Department of Education 1986).

TABLE 2
Selected Community Data

	Average for 3 Research Sites	Statewide Average	Average for 3 Wealthiest Communities
1984 Population (Est.)	134,016	3,144,792*	20,551
1983 Per Capita Income (Est.)	$ 8,013	$11,908	$26,296
Median Family Income	$15,240	$23,149	$45,895
Families Below Poverty Level**	28 - 33%	10%	2 - 3%
Children in Single-Parent Families**	42 - 51%	18%	8 - 13%
Persons 25+ with High School Diploma**	51 - 61%	70%	90 - 91%
Persons 25+ with College Degree**	9 - 20%	21%	48 - 49%

* Total
** Raw figures not available, so ranges of percentages across the three districts are presented.

(Source: Connecticut State Department of Education Town and School District Profiles, 1984-85. Hartford, CT: State Department of Education. 1986.)

TABLE 3
Selected School District Data

	Average for 3 Research Sites	Statewide Average	Average for 3 Wealthiest Communities
Total Enrollment	20,101	465,031*	3,411
Minority Enrollment	83%	21%	4%
Non-English Home Language	33%**	9%	2%
Economically Disadvantaged	47%	11%	1%
High School Graduates Entering Labor Market***	34 - 47%	29%	5 - 13%
High School Graduates Entering 4-Yr. Colleges***	22 - 26%	46%	77 - 82%

* Total

** This figure is based on available 1983-84 data, since one of the three research sites was unable to produce an accurate count of students who spoke non-English home languages in 1984-85.

*** Raw figures not available, so ranges of percentages across the three districts are presented.

(Source: Connecticut State Department of Education Town and School District Profiles, 1984-85. Hartford, CT: State Department of Education. 1986.)

Students graduating from high school in these districts are much more likely to enter the labor market immediately upon graduation than to enroll in four-year colleges, whereas this pattern is reversed in the state's three wealthiest communities, where more than three-fourths of the high school graduates go on to four-year colleges.

Mobility is also an extremely important characteristic of the students served in Connecticut's bilingual education programs. During the 1985-86 school year, close to one out of every five limited English proficient students was considered transient. Over 1,500 students (or 14% of the total number of students served) spent less than ninety instructional days in a bilingual program. Two-thirds of the transient students simply moved out of their districts before the end of the year (Prince 1987).

The prevalence of factors in these communities which have been found to influence student achievement negatively, such as low levels of education among parents and high levels of poverty and mobility, have two important implications to consider when judging the effectiveness of the bilingual education programs. First, reasonable expectations for student achievement must be established when determining program success, and second, measures other than standardized test scores should also be used as indicators of achievement. In the three programs under study, the following examples were just a few of the alternative indicators of success:

- In a second-grade English arithmetic contest in which three all-English classes and two bilingual classes participated, the first-, second-, and third-place prizes were awarded to students from the bilingual classes.

- One of only two students in an entire school who were admitted to the district's Gifted and Talented Program was a second grade bilingual education student.

- In one school approximately 40% of the first graders in the bilingual program made the school Honor Roll during 1985-86.

- In a schoolwide science fair, the winning entry was submitted by a second grade bilingual education class.

The following sections discuss other major findings in the areas of Curriculum, Instruction, and Program Administration. Not only have these findings prompted immediate action at the state and local levels to correct the identified weaknesses, but they have generated a considerable amount of interest among practitioners across the state who are beginning to use similar qualitative methods to examine the strengths and weaknesses of their own programs.

Curriculum - Major Findings

In general, the design of each program was based on research by Cummins (1981), which suggests that a successful reading and writing program for Spanish speakers in the elementary grades would:

(a) introduce initial reading instruction in Spanish;
(b) provide simultaneous oral English language instruction;
(c) delay English reading until students can read fluently in Spanish and are orally proficient in English (usually after two or three years);

(d) continue to develop Spanish literacy skills even after students begin to read in English; and
(e) allow students to remain in the programs for several years to develop threshold levels of biliteracy.

The schools varied in how soon they introduced English reading, ranging from the end of second grade to as early as the beginning of first grade. Although achievement test results were positive at all three schools, the lowest reading scores were found among second graders at the school where (a) English reading was introduced earliest, (b) Spanish reading instruction was discontinued after students were partially mainstreamed for English reading, and (c) students exited the program earliest. This finding suggests that teachers at this school may be introducing English reading too soon, before students have developed Spanish reading skills which are strong enough to transfer successfully to English.

Each of the participating bilingual education programs had developed a formal reading and writing curriculum parallel to the district's all-English curriculum, but the degree to which it was implemented in the classrooms varied from school to school. Ideally, a bilingual education curriculum should meet three criteria:

(a) It should match the district's English curriculum in scope and sequence as closely as possible.
(b) Curriculum objectives should increase in difficulty across grades or levels.
(c) The curriculum should include a system for determining when each objective has been successfully mastered.

Of the three districts which participated in this study, one met all three criteria. The second district met the first two criteria but now needs to develop a consistent method of testing to determine when curriculum objectives have been met. The third district's curriculum will require the most work: The curriculum guide is too long to be of practical use, objectives are not matched to the materials teachers actually use in their classrooms, a testing system has not been developed, and the participating teachers did not use the curriculum guide to maintain records of student progress.

In two of the schools sufficient classroom supplies and textbooks were available. However, in one of the schools, both English and Spanish textbooks and curricular materials were in such short supply in the bilingual education classrooms that teachers wrote each reading group's entire lesson on the board every day; students spent an excessive portion of instructional time simply copying from the board. This school was the only one of the three which has never received federal Title VII monies to purchase curricular materials and supplies.

Supplementary Spanish reading materials were also inadequate in two of the three schools. In one school half of the student population was limited English proficient, but less than 5% of the school's library books were in Spanish. In the other school, only two dozen Spanish library books were available for 170 students in the bilingual education program. Since the librarian at this school did not speak Spanish and had few Spanish materials, the library period was spent filling out English worksheets or watching English filmstrips.

Instruction - Major Findings

A characteristic common to each of the participating programs was that all of the observed teachers were highly-trained and had extensive teaching experience in bilingual and general education programs. All held Connecticut teaching credentials and nine of the eleven had either completed or were nearing completion of Master of Arts degrees in Bilingual Education, Early Childhood Education, or Special Education.

Another characteristic common to each program was that students were given plenty of opportunities to write, at first in Spanish and later in English, as their language proficiency improved. Students wrote letters, daily class journals, reactions to field trips and news events, and endings to unfinished stories. Some of the excellent instructional practices observed in the classrooms which research suggests increase literacy skills and motivation included:

- reading aloud to children;
- setting aside time for sustained silent reading;
- encouraging children to practice reading to each other;
- using reading time to expand vocabulary in the native language and in English;
- relating stories to children's own experiences;
- maintaining classroom libraries.

Other activities in the schools which promoted literacy skill development included:

- o a visit from a local librarian who helped students apply for library cards;
- o a Book Fair, where Spanish and English books were on display for students to purchase;
- o participation in the federal Reading Is Fundamental program, which provided free books in Spanish and in English for children to keep;
- o participation in districtwide Spanish and English spelling bees.

Program Administration - Major Findings

In two of the three schools the bilingual education classrooms were located next to all-English classes at the same grade, so that students from each program could participate in the other's activities. In the third school, where the bilingual education population was smallest and thus least visible, the bilingual education classes were isolated in a separate wing with the special education and kindergarten classes. This arrangement inhibited the participation of bilingual education students in mainstream school activities and should be discouraged for both bilingual and special education programs.

In the same school where program students were isolated, there was little evidence of support for the students' native language outside the bilingual education classrooms. No one in the main office spoke Spanish, and Spanish was not displayed visually in the school. In the other two schools, however, Spanish bulletin board displays and signs for parents were seen throughout the halls. The principal at one school collected writing samples in Spanish as well as in English each month, attesting to the fact that success in Spanish was highly valued.

In all three schools support services which were available to students in all-English classes, such as Chapter 1 tutoring, special education, gifted and talented education programs, and the services of reading specialists, were also available to students in the bilingual education programs. In-service training sessions for all-English classroom teachers were also open to all bilingual education teachers. In addition, the bilingual education programs in each district offered training sessions specific to the needs of bilingual education staff.

Conclusions

We hope that by presenting two different perspectives on the role of the researcher in bilingual education we have been able to describe several practical ways in which researchers can collaborate with practitioners as partners who share mutual educational and political concerns. Hakuta's most recent studies in New Haven, for example, were designed through close interaction with teachers whose needs were to better understand the ways in which skills transfer from Spanish to English and to plan means by which schools can support the development of both of a bilingual student's languages. Not only do Hakuta's results advance researchers' understanding of the intricate relationships between bilingualism and cognitive skills, but they also increase practitioners' understanding of the pedagogical importance of developing and maintaining proficiency in the native language.

Prince's ethnographic study also responds to the needs of practitioners by shifting the state's evaluation emphasis from simply monitoring student performance to the identification of program characteristics which promote student success. Descriptions of the curricular, instructional, and administrative components of successful programs can serve as models for bilingual programs in other districts, and feedback provided to individual schools can pinpoint areas of program weakness which require corrective action.

By engaging in collaborative planning and implementation of these and other research studies with practitioners, we hope to strengthen the bond between research and practice so that language policies in education are cohesive, consistent, and in the very best interests of limited English proficient students.

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