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ABSTRACT

An evaluative study was done of California's Bilingual Education Program, the goal of which has been to teach English and other academic skills to more than half a million students with limited English backgrounds. While the State Department of Education provided no comprehensive evaluation, there is evidence that some components have been extremely successful. Where students are instructed by a bilingual teacher, academic subjects are introduced in a language students understand and English is taught simultaneously, gains were demonstrated. Schools using this approach report English fluency for most students within 2 to 3 years. Areas for concern include the following: (1) only about one-third of students in bilingual programs are enrolled in bilingual classrooms and only about-half of these are staffed by bilingual teachers; (2) most children in the program are served through individual learning plans or other methods for which there is no good evidence of effectiveness; and (3) although bilingual classes are the most cost effective method of providing instruction, efforts to implement fully this method on a statewide basis have been limited. The main impediment to implementation is a shortage of bilingual teachers. Five figures supplement the text and three appendices provide two graphs and two tables showing the concentration of limited English students statewide and teacher demand figures and projections. A list of 12 references is also provided. (JB)

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prepared by
Assembly Office of Research

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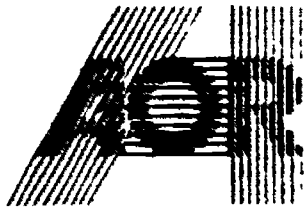
BILINGUAL EDUCATION:

LEARNING ENGLISH IN CALIFORNIA

June 1986



prepared by
Assembly Office of Research

Patricia Gandara, Project Manager
Andrew Sun

EXECUTIVE SUMMARY

The goal of California's Bilingual Education Program is to teach English as well as other academic skills to the more than half a million students in the state with limited-English backgrounds. While the state Department of Education has provided no comprehensive evaluation, there is evidence that some components of the program have been extremely successful in meeting this goal. Where students are instructed by a bilingual teacher and where academic subjects are introduced in a language that students understand and English is taught simultaneously using a comprehensible approach, impressive gains have been demonstrated. A number of school districts using this approach report that English fluency is being achieved by most limited-English students within two to three years, and academic test scores for these children are at or above the district norms for all students.

There remain, however, reasons for serious concern about the functioning of California's program.

- Only about one-third of students in the bilingual program are enrolled in bilingual classrooms, and only about half of these classes are staffed by bilingual teachers.
- Most children in California's program are served through individual learning plans or other methods for which there is no good evidence of effectiveness.
- Bilingual classes are the most cost effective method of providing instruction to limited-English children (when properly staffed they add little or no cost to the regular expenditures for instruction). However, there has been limited effort to implement fully this method on a statewide basis.

A major impediment to offering bilingual classes as the centerpiece of California's Bilingual Program is the shortage of bilingual teachers. Only 60 percent of the teachers in the program are fully certified as bilinguals, and with an increasing limited-English population and a decline in the number of teachers preparing for bilingual credentials, the shortage could worsen.

This office, however, has identified a number of problems that have inhibited the number of teachers coming into the field, and we have suggested a series of strategies to remedy these problems and attract many teachers to bilingual education. If the policy initiatives outlined in this report were to be implemented, the number of properly trained bilingual teachers could be increased significantly, thus strengthening the effectiveness of current bilingual education programs.

PREFACE

Bilingual education in California has, for some time, been the focus of an emotional debate; a debate often centered on issues outside the basic question of cost effectiveness. On the eve of this debate, the most important questions that should be considered by the Legislature remain the same:

- Is the bilingual program effective?
- Does California have enough teachers to staff the program adequately?

Perhaps naively, the Assembly Office of Research believes the facts and relevant research might shed some light on this debate. This report was prepared in that vein. It is divided into two sections; the first section deals with program effectiveness, and the second with teachers. We make recommendations in each section. Given the enormous number of limited and non-English speaking children in California, we believe that bilingual education and its effects on the long-term success of these students must be evaluated in light of the demographic changes occurring in California.

California has long been considered the national leader in bilingual education. This state serves more children and does it in a more innovative manner than any other state in the Union. Hence, we believe the issue for California is not whether to provide a program of bilingual education, rather what kind of program it should provide. We believe that

the problems of teaching children with limited English also present opportunities to strengthen the overall academic excellence of the state's education system. If California chooses to maintain its position as a leader in education, it must continue to improve its bilingual education program. To do otherwise would be a signal to the rest of the country that California's education system will not be able to respond to a vastly changing student population.

INTRODUCTION

When school opened in California in September 1985, more than half a million children entered the classroom without the ability to speak English or fully understand their teachers. By 1990, 654,000 children, at least 14 percent of the total public school population, will be limited-English students. What do we know about these children and how they should best be educated?

Limited-English children in California's schools come from a variety of language backgrounds. Most speak Spanish, but many speak Asian languages, the fastest growing segment of the limited-English population. What almost all of these children have in common is that their families are newly arrived or have not yet entered the mainstream of American culture, and they are likely to be poor. Families of children with limited-English skills seldom have had much contact with American schools and often are unable to help their children prepare for the experiences they will encounter in school. Yet, as much as any parent in American society, these parents hope that the schools will offer their children the opportunity that they struggled so hard to make possible: a good education.

It was with this great hope in mind that the Bilingual Education Program officially came into being in the 1970s. A long history of educational failure by ethnic minorities led to a landmark U.S. Supreme Court decision in 1974[1] that required public schools to remedy situations

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[1] Lau v. Nichols was heard in the federal court in San Francisco and was brought on behalf of Chinese students in the San Francisco school district.

in which "students who do not understand English are effectively foreclosed from any meaningful education."

In 1976, California passed the Chacon-Moscone Bilingual Education Act to address the concerns raised in the Supreme Court decision. It was the goal of this legislation to meet two important needs of limited-English students: to learn English and to achieve academically at a level equal to their English-speaking peers. The Act was amended in 1981 to strengthen certain aspects of the program which today serves more than 500,000 children. Although no funds are specifically earmarked for bilingual education, the state Department of Education estimates that the cost of services provided to limited-English children is approximately $100 million per year. This would represent about 3 percent of all specialized education funds that go to schools.[2] Most of these funds are used to provide services to students not in bilingual classes.

Recently, a new focus on excellence in the schools has caused many questions to be raised about the effectiveness of public schooling in general, and specifically about programs such as bilingual education. Declining test scores and high dropout rates, particularly acute among language minorities, have alerted the public to the fact that all is not well in public education. Moreover, bilingual education does not appear to

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[2]While the costs of bilingual education are difficult to determine, the State Department of Education, Office of Bilingual Education estimates that approximately $100 million (both federal and state) is spent in support of the program. Simply compared to the approximately $3.2 billion budgeted by the state for specialized education programs (according to the 1986-87 Analysis of the Budget Bill, Legislative Analyst), only 3 percent is allocated for educational services for limited English students.

have been the panacea for all the academic problems of language minority youth that it once had been hoped to be. With the imminent sunsetting of the Bilingual Education Act and growing assertions that it lacks effectiveness while relying on overly prescriptive methods, a review of the program is in order. Has it failed? After more than a decade of experimentation and research, what have we learned?

Before we can proceed further with a discussion of bilingual education, it is necessary to define terms. No other term in education is used more loosely or with less agreement on its meaning than bilingual education. As the saying goes, it is many things to many people. This fact, however, has plagued the field and resulted in bad theory, poor evaluations, and inadequate program implementation.

What is Bilingual Education?

To most people in California the bilingual classroom and the state's Bilingual Education Program are synonymous. The general perception is that limited-English-speaking students are served in a classroom with a teacher who spends some portion of the day teaching in a language other than English. For most limited-English-speaking children in California, however, this is not the case. The Bilingual Education Program and the bilingual classroom are two very different things. About one-third of all limited-English students are in bilingual classes, and of these, only half are taught by a teacher who speaks a language other than English.

CALIFORNIA'S BILINGUAL PROGRAM

The Bilingual Education Program in California is an umbrella term under which fall many different program options.[3] The bilingual classroom with which so many people associate bilingual education is only one of these options. Flexibility is a major characteristic of California's Bilingual Program. This flexibility allows school districts to offer a variety of different options for serving limited-English-speaking children. Parents are free to choose among the options offered by the district or to remove their children from the program in favor of the regular English-only classroom. Among the bilingual program options available to districts and students at the K-6 level are:

- Individual Learning Plans: Thirty-nine percent of all K-6 children are enrolled in this program option. Children receive at least 20 minutes a day of specialized language assistance. This may occur in their regular classroom, or they may be removed from the classroom for this instruction. It may be provided by a bilingual teacher, aide, or a language development specialist.

- Planned Variation Classes: This program option allows districts the opportunity to experiment with alternatives to the bilingual classroom such as immersion (English only) or sheltered English classes. Fewer than 1 percent of limited-English-speaking children are served through approximately 90 planned variation classes in California although the state regulations allow for up to 750 such programs.

- Bilingual Classes: About half of all eligible K-6 children receive instruction in a bilingual classroom. Such classes are required where there are 10 or more students of the same language concentrated at the same grade level in a school. However, there is great diversity in the way children are instructed in these classes

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[3]See "Legal Requirements for the Implementation of State Bilingual Programs," prepared by the Bilingual Education Office, Categorical Support Program Division.

and they may or may not have a teacher who speaks their language. Where they do not, an aide who speaks the language of the children is supposed to be provided.

At the secondary level, bilingual classrooms are not required. There are two basic ways in which these students are served:

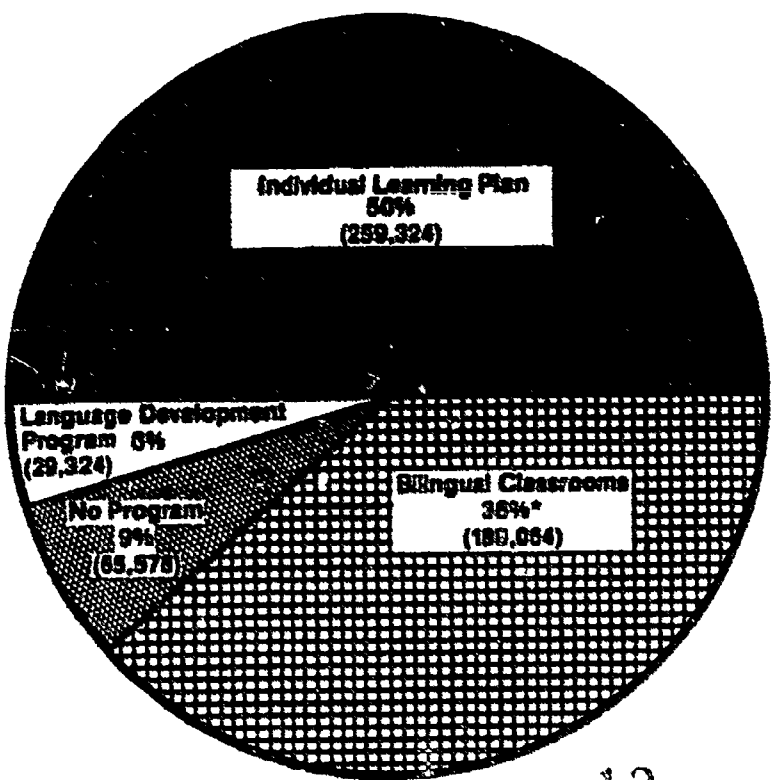
- Language Development Classes: About 18 percent of secondary students receive instruction for one class or more a day by a bilingual teacher, aide, or language development specialist as a part of this program. How instruction is delivered varies among schools.

- Individual Learning Plans: Seventy-five percent of secondary students are served through this method. As with elementary students, the amount of assistance as well as the method of delivery and the person providing assistance all differ greatly amongst schools and districts.

Additionally, about 10 percent of all K-12 limited-English students either fall under the category of Impacted Languages (those for which inadequate resources are available to provide primary language assistance) or they are unserved.

Figure 1

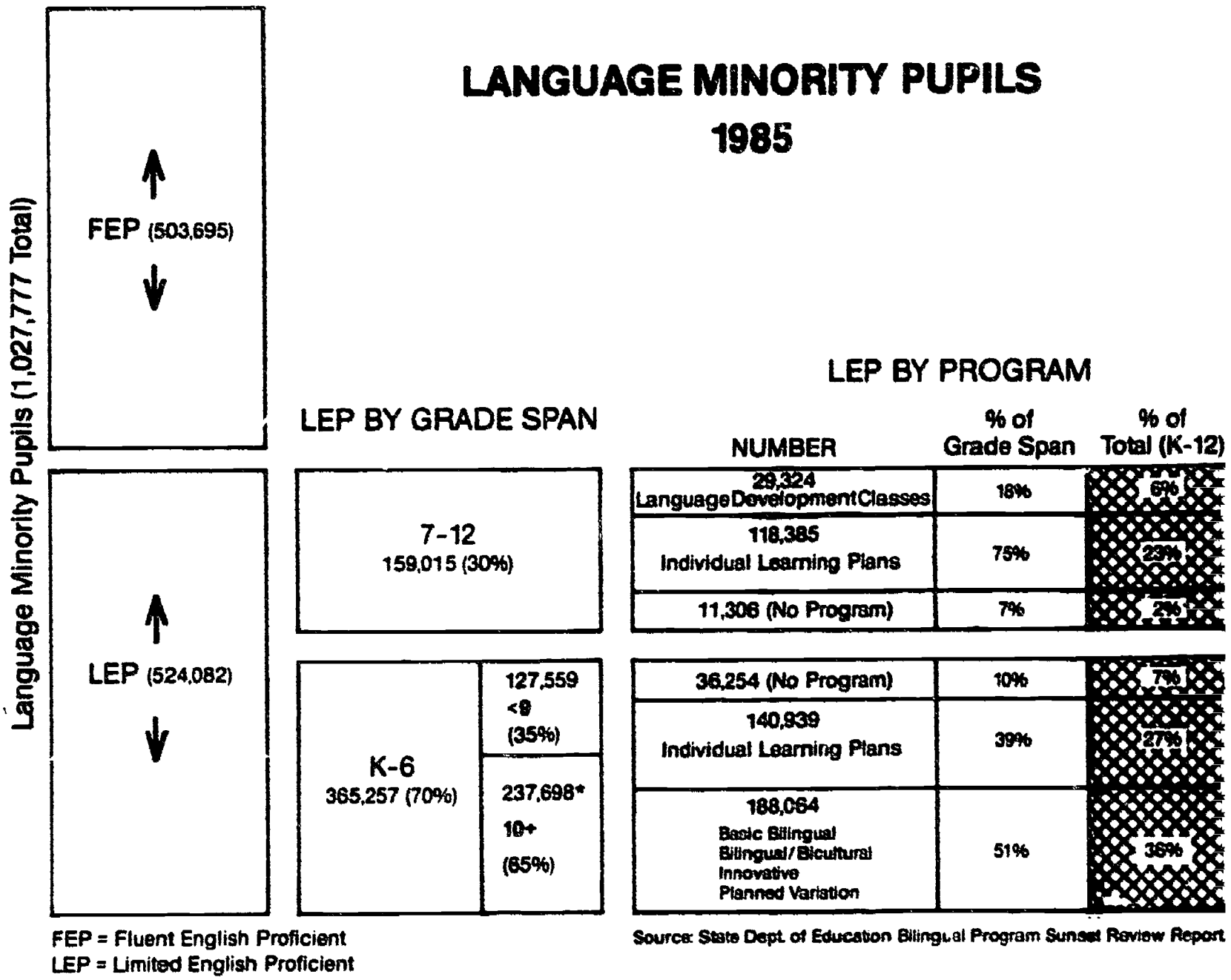
Limited English Proficient Students by Type of Program (K-12) 1985



* Includes K-6 Program Options
Basic Bilingual
Bilingual/Bicultural
Innovative
Planned Variation

Source: Based on State Dept. of Education 1985

Figure 2



FEP = Fluent English Proficient
LEP = Limited English Proficient

Source: State Dept. of Education Bilingual Program Sunset Review Report

Whether, and how, limited-English children are served in California's bilingual education program depends not only on the language they speak (i.e., there are no programs in "exotic" foreign languages) but also where they are located. Seventy-three percent of all limited-English students are concentrated in six California counties (see Appendix A). In these areas, school districts are most likely to find teachers and materials to serve the needs of these children. The 20 school districts with the highest numbers of limited-English students in 1985 were:

Figure 3

DISTRICTS RANKED BY ENROLLMENT OF LEP* STUDENTS
SPRING 1985, ALL LANGUAGES COMBINED

District Name	Number LEP Enrolled Spring 1985	LEP As Percent District Enrollment
Los Angeles Unified	134,171	23.8
San Francisco Unified	18,787	29.8
Santa Ana Unified	16,763	47.5
San Diego Unified	14,234	12.8
Long Beach Unified	11,524	18.7
Oakland Unified	9,175	17.8
Stockton City Unified	7,940	29.5
Fresno Unified	7,854	14.4
Montebello Unified	7,496	25.3
Compton Unified	6,305	23.5
Sweetwater Union High	6,106	25.2
Glendale Unified	6,027	30.1
Pomona Unified	5,217	24.1
Garden Grove Unified	4,747	13.0
Sacramento City Unified	4,717	11.0
East Side Union High	4,596	20.5
San Jose Unified	4,423	14.5
Pajaro Valley Joint Unified	4,133	30.9
Calexico Unified	3,679	72.1
ABC Unified	3,619	16.4

*LEP: Limited-English proficient.

Source: California State Department of Education.

Program Effectiveness

Whether we consider California's Bilingual Education Program to be effective or not hinges on the answers to two questions:

- Are the children in the program learning English?
- Are they academically successful?

Language Acquisition

Although the state Department of Education does not collect data on language acquisition for all limited-English children, they do provide data on the numbers of limited-English students who are reclassified as fluent-English speakers each year. Additionally, we can infer the answer to the question of whether students are learning English from a number of studies that have been done by individual school districts in the state.

An average of about 50,000 students are reclassified as fluent-English speakers yearly, according to the state Department of Education. Moreover, recent evaluations conducted by local school districts[4] tell us something about the amount of time it takes to achieve this status. Between 70 and 80 percent of limited-English students have mastered English sufficiently well to leave the bilingual program between two and one-half and three and one-half years after entry. For the child who enters school in California in kindergarten, fluent English skills usually are achieved by about the third grade.

For most people concerned with the effectiveness of bilingual education, the important question is not whether students have mastered conversational English, but whether their English skills are strong enough to promote solid academic learning. It is in this area that second language acquisition theory and research have played an important role in the development of some particularly effective programs.

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[4]See Oak Grove School District, Bilingual Education Program, Evaluation Report, 1984-85, San Jose, Calif.; San Jose Unified School District, First Annual Report: The Achievement of Limited English Proficient Students, 1984-85; F. Tempes, L. Burnham, M. Pina, J. Campos, S. Matthews, E. Lear, C. Herbert, Implementing Theoretically Sound Programs: Do They Really Work?, a presentation to the California Association for Bilingual Education, Ninth Annual Conference, San Francisco, California, January 12, 1984.

In an ongoing national evaluation of 4,000 limited-English students,[5] which is being conducted under the auspices of the U.S. Department of Education, the effectiveness of English only ("immersion") classes is being compared to two kinds of bilingual classes -- one where the primary language is used minimally and the other where there is greater use of the students' primary language. First-year results show that children enrolled in bilingual classes with the greatest use of the primary language have made more progress in English acquisition than either those in the English-only classroom ("immersion") or those enrolled in the bilingual class with less primary language exposure. This finding contradicts what the evaluators had hypothesized would occur and lends further support to the conclusions of California school districts that have found that limited-English children do learn English well and relatively rapidly when it is presented in a comprehensible, sensible form.

Academic Performance

Information about the academic performance of limited-English students in California's bilingual program varies greatly by program option, making a single statement about effectiveness impossible. For this reason, we have reviewed the major options separately.

Individual Learning Plans: Most of California's limited-English students are served through individual learning plans. In schools where a bilingual classroom cannot be provided or where it is deemed inappropriate, an individual learning plan that uses the primary language and includes

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[5]Memorandum from David Ramirez, SRA Technologies, Inc., Mountain View, CA, to Advisory Committee Members regarding summary results of pre/post achievement test comparisons for matched groups of target students, FY 1984-85, December 1985.

sufficient time for instruction and appropriate materials can be a good solution. Some districts report that they are providing such services, and there is some evidence of their effectiveness, although the data are extremely limited.[6]

In the absence of careful (and costly) monitoring and thorough evaluation, however, there is also the risk that children will not be well-served by individual learning plans that are poorly thought out or badly administered. This risk is increased by the fact that a great deal of discretion is left to the local schools to decide how, by whom, for how long, and with what materials the children will be instructed. No good data are now available to help us evaluate the overall effectiveness of the individual learning plan option of the Bilingual Education Program. This is particularly unfortunate since so many children -- half of all limited-English students, and three-quarters of the secondary level students -- are being served through this method. The lack of a comprehensive evaluation of this option is critical in light of the fact that it is more expensive than providing a self-contained bilingual class. Extra personnel, in addition to the classroom teacher, must be hired to deliver the additional help the children receive.

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[6]The California State Department of Education, Office of Research and Evaluation, has reported some pretest/post-test data in limited-English-proficient children in its reports on consolidated application programs from 1982-83 and 1983-84. These data, however, do not draw comparisons between students in different program options, nor do they report levels of significance for any of their gain scores. Hence, these data are of little use in evaluating the effectiveness of the various components of the Bilingual Education Program or the program as a whole.

Immersion classes, which have been experimented with under the Planned Variation option in grades K-6, have been demonstrated to be effective with some children, but not with others. There are a number of examples of successful immersion programs for English-speaking students in California, as well as elsewhere.[7] However, researchers have been quick to caution that those children who are successful with this kind of approach have several characteristics in common. They come to school with good educational backgrounds, high underlying proficiency in their native language, strong self-concepts, and a middle-class orientation towards schooling. They are also usually members of the majority culture attempting to learn a second language while living in their own country (Lambert & Tucker, 1972; Swain, 1984). Hernandez-Chavez (1984), in a review of immersion instruction and language minority children, concludes that there is no evidence for the effectiveness of this approach with lower socioeconomic status Spanish speakers.[8]

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[7]See California, State Department of Education, Studies on Immersion Education, Sacramento, 1984; Davis Joint Unified School District, Spanish Immersion Program: A Report, May 15, 1986.

[8]Additionally, an unfortunate myth abounds that Asian students excel in such immersion classes and hence demonstrate no special needs for curricular modification or language assistance. The evidence for this belief comes from test scores and postsecondary education participation rates. However, a look beneath the surface of these statistics reveals a somewhat troublesome picture. As a group, Asian students perform only slightly better on the verbal section of the SAT than do Hispanics, and considerably below the Anglo average (California Postsecondary Education Commission, 1985). Moreover, although Asian postsecondary enrollments are high, relatively few Asians enroll in the humanities and social sciences; they are found disproportionately in the physical sciences and engineering which tends to preclude their full participation in many important areas of civic life such as journalism, law, and politics. Perhaps most unfortunately, however, is the fact that the needs of some Asians with serious educational handicaps are overlooked because they fall into an ethnic category that is perceived to be advantaged. School districts report that many of their Southeast Asian students have considerable difficulty in making the transition to American schooling and are unable to perform adequately in an English-only setting (Gandara, 1984).

Self-contained bilingual classes are found only in grades K-6 and serve about one-third of all students in the Bilingual Education Program. Instructional methods used in these classes vary a great deal because the field of bilingual education has undergone a period of rapid growth and not all bilingual educators have had time to catch up with recent developments. The variation in methods has made good large-scale evaluations impossible and, until recently, has inhibited our knowledge about the effect of bilingual classes on students' achievement. However, recent research has provided evidence for an approach that many educators thought made sense all along. That is, in order that students not lose valuable instructional time trying to learn subject matter in a language they do not understand, they should be taught core academic subjects in their primary language while simultaneously receiving instruction geared mainly to the acquisition of English. This approach has been demonstrated to have positive effects on the acquisition of English when compared with other methods. It appears also to produce positive results in the area of academic performance.

Evaluation studies from San Jose, Oak Grove, Baldwin Park, and Carpenteria School Districts all report that students who attended bilingual classes, most of which were based on this model of instruction, are achieving at or, more commonly, above the national norms on English-only tests of reading and mathematics. In most of these districts the formerly limited-English students are outperforming the native English speakers. It is also notable that a study done by the Rand Corporation in 1982 (Carpenter-Huffman & Samulon) found self-contained classrooms to be the most cost-effective method of providing bilingual education since no extra personnel beyond the classroom teacher are required to staff them.

Language Development classes are found at the secondary level where they are provided for about 18 percent of the limited-English students. No data have been collected on their effectiveness, and like all bilingual education at the secondary level, little is known about instructional strategies employed in the classes. However, the classes are taught by credentialed bilingual teachers or language development specialists whose task it is to provide English language development independent of subject matter learning. To the extent that this occurs, one might surmise that the classes provide valuable language learning opportunities for these students. However, the effect of language development classes on students' academic achievement is not known.

Summary and Recommendations

The high degree of flexibility and the variety of options built into California's Bilingual Education Program make it impossible to comment on the effectiveness of the program as a whole. Additionally, the fact that the State Department of Education does not provide usable evaluation data on most of the program options limits the information which can be brought to the public policy debate. This is particularly disturbing since the methods that bilingual educators use to instruct limited-English students has been an area of serious debate and controversy for some time. In this sense, we find it surprising that a greater effort has not been made by the state Department of Education to collect and publish evaluation data that could help put some of these questions to rest. In light of the very limited information available, we are forced to confine our recommendations to that which is known.

1. California's current system of bilingual education is very flexible and until evidence is produced that the various alternatives to self-contained bilingual classes are effective in academic instruction, greater flexibility should not be introduced into the system.

2. The state Department of Education should allocate resources to collect and publish evaluation data on the various options offered by the bilingual program. Informed decisions about the program cannot possibly be made in the absence of any real knowledge of the effectiveness of the components of the program.

3. The state Department of Education should act on the limited knowledge that it does have. Bilingual classrooms that use a comprehensible language approach appear to be working, and at a lower cost than other options. This approach would seem to merit replication and further evaluation at more sites.

4. A thorough review of the secondary level bilingual program ought to be conducted by the state Department of Education. It appears that this is the weakest link in the state's bilingual program, with only 13 percent of all bilingual teachers serving approximately 30 percent of the limited-English students. When resources are spread so thinly, it necessarily raises concerns about the adequacy of the program.

CALIFORNIA'S BILINGUAL TEACHERS

Ultimately, any education program can be only as effective as the people who teach in it. Nowhere is this more true than in bilingual education where teachers are expected to have two competencies: subject matter and a second language. What are the qualifications to be a bilingual teacher, and who teaches in California's program? The answers to these questions bear directly on our efforts to project what the future demand and supply of teachers for the Bilingual Program will be.

What Are the Qualifications?

The Chacon-Moscone Bilingual/Bicultural Education Act required highly trained and well-qualified personnel to provide educational instruction to limited-English students. A bilingual/cross-cultural credentialed teacher was defined as a ". . . person who holds a valid, regular California teaching credential and holds either a bilingual/cross-cultural certificate of proficiency or other credentials in bilingual education . . . or a bilingual/cross-cultural specialist credential . . ."

The Legislature recognized that the supply of bilingual/cross-cultural credentialed teachers would not initially meet the demand and made provisions in the legislation for districts to apply for teacher waivers. Such teachers on waiver, however, were required to demonstrate progress toward completion of the certification in bilingual instruction, while providing instruction with the assistance of a bilingual aide.

Who Teaches in Bilingual Programs?

Altogether there are approximately 14,000 teachers in the bilingual program; 60 percent are fully credentialed and 40 percent are on waivers. The majority of these teachers, approximately 60 percent, are non-Hispanic white and 87 percent of them teach children in grades K-6.[9] Credentialed bilingual teachers tend to be newer teachers and usually earn lower salaries than the average teacher in the district since they have fewer years of classroom experience.

Figure 4

CREDENTIALED BILINGUAL TEACHERS' SALARY BY ETHNICITY, COMPARED TO AVERAGE SALARY OF ALL TEACHERS 1984-85

Teacher Category	Average Salary	% of Total Teachers
All teachers	$ 27,030	100%
All credentialed bilingual teachers	25,912	5%

Source: California Basic Educational Data System (CBEDS) 1985.

Future Teacher Demand

In 1985, approximately 524,000 limited-English students were eligible to be served by over 14,000 teachers in California's Bilingual Education Program. By 1990, this population will increase to approximately 654,000 and by the year 2000, to more than 810,000. Based on state Department of Education estimated staffing ratios, by the year 1990 California will need nearly 23,000 bilingual teachers, and by 2000, the need will grow to over

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[9]California Department of Education, Office of Bilingual Education.

28,000. However, if projections were based on actual staffing patterns, the future teacher demand would be considerably lower than we have projected. Our assumption is that the number of teachers teaching in the bilingual program in the future will more accurately reflect the state Department of Education's estimated teacher need, especially at the upper grades.[10] At the current rate of recruitment and training, California will not meet this need (see Appendix B).

Future Bilingual Teacher Supply

In past years, since 1981, California has issued more than 7,500 bilingual credentials or an average of 1,750 per year.[11] Taking into account the recent decline in the number of teachers completing bilingual credentials, we estimate that, conservatively, the current system can produce without any changes or additional revenues at least 1,200 new bilingual credentialed teachers annually. Given this rate of credentialing, we estimate that by 1990 the teacher training system will be able to supply only about 12,000 of the 23,000 bilingual credentialed teachers needed (see Appendix C). While projected supply can meet only

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[10]To clarify this relatively "high" demand projection, the reader should know three factors. First, there is a significant discrepancy between a number of teachers that the state Department of Education estimates are needed and the number legally required to teach limited-English-speaking children. Second, in 1984-85, 14,000 teachers taught in the bilingual program; however, a demand analysis, based on state Department of Education estimated student/teacher ratios, indicates a need for over 17,000 teachers. Third, for students in grades 7-12 while the state Department of Education uses a ratio of 35 : 1 to calculate teacher demand, there are no legal requirements that mandate use of this ratio. Hence, the number of teachers actually employed is lower than the number needed.

[11]California Commission on Teacher Credentialing, "Credential Profile -- 1984-85," November 1985.

50 percent of the demand, the shortfall of available bilingual teachers is considerably less than the projected shortfall for all teachers in California by 1990.[12]

Meeting the Need for Bilingual Teachers

Given the anticipated shortfall of credentialed bilingual teachers, it is clear that California must continue to rely on the waiver process to staff the bilingual program for some time to come. However, a number of strategies can be adopted to reduce the system's dependence on waivered teachers.

Both the CSU and UC systems can train more bilingual teachers. Based on a report submitted to the Commission on Teacher Credentialing by the Office of the Chancellor of the California State University,[13] the 13 CSU campuses will produce a total of 444 bilingual credential candidates during the 1985-86 school year. According to this report, the California State University system expects modest growth, about 5 to 10 percent, in the number of bilingual credentials to be produced over the next two years. In discussions with directors of bilingual teacher training programs around the state, it is apparent that CSU need not target such modest goals. With small investments of resources, better administrative support, and better coordination, these numbers can be increased.

The role of the UC system is more problematic. UC has not played a major role in teacher training; only 47 students are candidates for

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[12]According to the California Department of Education, 80,000 new teacher will be needed by 1990-91, but only 55,000 new teachers are projected to be in the pipeline.

[13]California Commission on Teacher Credentialing, "Status Report on Bilingual Cross Cultural Teacher Preparation," February 1986.

bilingual credentials from all of the UC campuses this year. However, UC should be encouraged to become more active for several reasons. First, it attracts high-caliber students which the teaching profession needs. Second, its training programs are generally successful in training competent teachers (close to 90 percent of all UC trained teachers pass the CBEST on their first attempt).[14] And third, as a publicly supported institution of higher education, training qualified teachers for the state's public education system should be one of its major roles. We believe UC could easily double its output of bilingual teachers by the year 1990 with only modest increases in support for the program.

It is evident that the system can train more bilingual teachers. The next question is: do we have a pool of potential teachers to train?

Nearly one-third of California's 18 to 19 year olds are Hispanic and Asian. Of these about half have some level of skill in a language other than English. Non-language minority students who have acquired a second language in school and an increasing number of well-educated immigrants add to the numbers of potential teachers. Finally, if we consider the 18,000 individuals who are currently working as bilingual classroom aides, altogether there is an enormous pool of potential bilingual teachers in this state. If state policy were directed toward providing incentives for these people to become trained as credentialed bilingual teachers, we could more than meet our needs for bilingual teachers to the year 2000 and beyond.

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[14] California Commission on Teacher Credentialing, "Third Year Passing Rates on the California Basic Education Skills Test (CBEST) and Passing Rates by Institution Attended," October 1985.

In order to increase the numbers of teachers in bilingual education, we have proposed several strategies. These strategies call for action by increasing the number of teachers trained; recruiting, retraining and better using bilingual teachers; and reducing barriers and screens which discourage individuals from becoming bilingual teachers.

Some of the specific strategies which can be implemented to increase the number of teachers trained by the year 1990 include:

STRATEGIES TO INCREASE TEACHER OUTPUT	Estimated No. of Additional Teachers Generated by 1990
1. Earmark state funding to the CSU system in order to increase recruitment and training of bilingual teachers each year by at least 10 students per year at each campus.	600
2. Earmark state funding to UC in order to increase recruitment and training of bilingual teachers each year by at least 10 students per campus per year.	280
3. Build a systematic career ladder to induce bilingual aides to become credentialed teachers. This would involve strong support systems at the community colleges and CSU and college credit for classroom experience.	750
4. Develop a category of Teaching Associate for people with strong second language background and weaker English skills, but who have a B.A. equivalent from the educational system of the targeted populations. These teachers could also team with non-bilingual teachers at early grades.	100

There are a number of strategies that can be employed to attract new categories of people into the California Bilingual Program and to use better the teachers we now have:

STRATEGIES TO RETAIN AND ATTRACT BILINGUAL TEACHERS AND USE BETTER THE ONES WE HAVE	No. of Additional Teachers Generated by 1990
1. Recruit outside the state (targeting particularly New Mexico and Florida)	200
2. Recruit outside the country, notably in Puerto Rico, Mexico, Spain, Hong Kong, and China (this recruitment might well take the form of exchange or partnership programs)	100
3. The $2,500 yearly pay incentive will help to attract credentialed bilingual teachers not now teaching in bilingual programs back into the field.	500
4. Team teaching: team fully credentialed teachers with a regular classroom teacher to serve twice the number of students by dividing English and non-English tasks between the two teachers	1,000
5. Retrain some waivered teachers as language development specialists. This would legitimize their status in the program and give them skills to work with certain categories of limited-English children.	800
6. A campaign (like "A Class Act: Be a Teacher") to tap the pool of potential bilingual teachers who are not now teaching, but could be brought into the field with minimum extra preparation (e.g., bilinguals who possess a B.A. or equivalent)	500

Only part of the problem of staffing bilingual classrooms is addressed through better recruitment and training of bilingual teachers. Another impediment to meeting the need for teachers is the series of barriers and screens that prevent students from completing their studies and acquiring the bilingual credential.

Attrition rates are high for all college students, and persons seeking certification as bilingual instructors must demonstrate competency not only in subject matter, as required for all teachers, but also in areas of

second language acquisition, instructional methodology, and culture. These additional requirements mean that there are more educational barriers to certification than for other teachers.

For all persons who complete required teacher training, passage of the California Basic Educational Skills Test (CBEST) is mandatory. (All new teachers must pass the CBEST in order to teach.) Unfortunately, language minority persons who desire to become bilingual teachers have a low rate of passage on this teachers' exam (CBEST) in spite of having successfully completed all coursework and training. Only 46 percent of Hispanics and 56 percent of Asians taking the test passed the CBEST in 1984-85.[15] Failure to pass the test further reduces the number of language minorities who can receive bilingual credentials.

For waivered teachers, passing the language competency exam to qualify as fully credentialed bilingual teachers also represents a barrier. Only 6 percent of all test takers in 1984-85 passed all three sections of the exam.[16] This low rate of passage significantly reduces the number of teachers who successfully leave waivered status.

For those who make it through the system, the additional education and training requirements are not usually compensated. The average bilingual teacher makes no more money than other teachers who have had to meet fewer requirements. Additionally, the bilingual teacher will probably have to spend more time developing classroom materials that are not available in

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[15] Ibid.

[16] California Commission on Teacher Credentialing, "First Annual Report on the Administration of the Examination Required for the Issuance of the Bilingual Certificate of Competence," December 1985.

the students' language. It is therefore not surprising that out of 7,500 bilingual teachers trained since 1981, many are not now teaching in bilingual classrooms.

STRATEGIES TO REDUCE THE IMPACT OF BARRIERS AND SCREENS	Estimated No. of Additional Teachers Generated by 1990
1. Increase the pass rate on the CBEST examination by special preparation for bilingual teacher candidates and by increasing the time on each section by 30 minutes.	500
2. Full-cost stipends provided for teachers on waiver who wish to attend intensified language institutes such as those offered in Mexico to increase pass rate on the language exam.	600
3. Introduce a $2,500.00 bilingual teacher salary incentive to reduce attrition from the field from our current estimated 5 percent to 3 percent annually. Saving...	1,000

By implementing all of these strategies, California could produce an estimated 6,900 additional bilingual teachers by 1990. Added to the 12,000 fully credentialed bilingual teachers we are expected to have if we make no changes, California can increase the number of fully credentialed bilingual teachers in the classroom to almost 19,000 or, from 60 to 82 percent of all teachers in the program. Moreover, if the same level of effort were sustained, the bilingual program could be fully staffed by credentialed bilingual teachers by the year 2000 (see Appendix C).

Figure 5

BILINGUAL TEACHER SUPPLY AND DEMAND

	Total Demand	Status Quo Supply of Credentialed Bilingual Teachers*	Status Quo Supply Including Waivered Teachers	Supply with AOR Strategies
1985	17,690	8,362	13,846	---
1990	22,947	12,000		19,000
2000	28,412	16,600		---

*Includes language development specialists

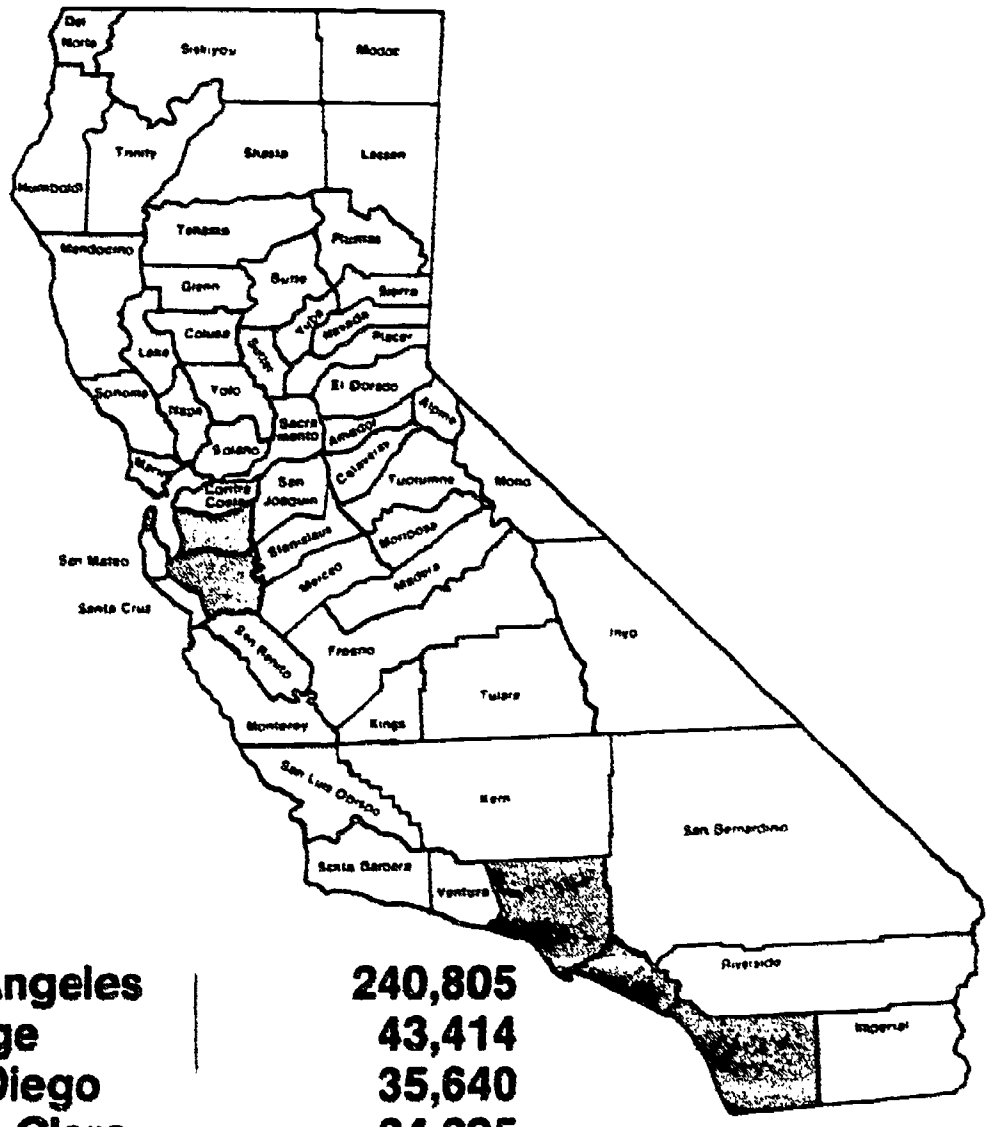
Summary

No other state in the Union has a potential pool of bilingual teachers as large as California. Nor does any other state have as large and well-developed system of higher education as California. This state has both the human and educational resources to more than meet its needs for bilingual teachers.

The current shortage of teachers for the bilingual program is probably due, in part, to a reluctance of the system to respond to the needs of a program that has been perceived by some to be ineffective. This is unfortunate and unnecessary. Good teachers are central to the effectiveness of any educational program. Moreover, there is mounting evidence that some components of the bilingual program are extremely effective. If we merge good teachers with proven bilingual strategies, California's bilingual program can be exemplary.

APPENDIX A

Primary Concentration of Limited English Proficient Students by County (K-12) 1985



1. Los Angeles	240,805
2. Orange	43,414
3. San Diego	35,640
4. Santa Clara	24,295
5. San Francisco	18,793
6. Alameda	16,726

TOTAL = 379,673 or 72.4% of all LEP pupils

Source: Based on State Dept of Education, 1985

APPENDIX B

Bilingual Teacher Supply and Demand Projections 1990

K-6 LEP Population = 457,800
(Based on 70% of total LEP)

7-12 LEP Population = 196,200
(Based on 30% of total LEP)

Total LEP Population = 654,000
or 14% of total public school population (4.6 million)

K-6 Programs

Bilingual Classes**

233,478 students
(51% of total K-6)
@ 20:1 ratio* = **11,674 teachers**

Individual Learning Plans

178,542 students
(39% of total K-6)
@ 35:1 ratio* = **5,101 teachers**

Unserved

22,890 students
(10% of total K-6 — assuming about 50% of these will be served)
@ 30:1 ratio*** = **763 teachers**

K-6 Teacher Demand = 17,538

7-12 Programs

Language Development Program

35,316 students
(18% of total 7-12)
@ 35:1 ratio* = **1,009 teachers**

Individual Learning Plans

147,150 students
(75% of total 7-12)
@ 35:1 ratio* = **4,204 teachers**

Unserved

6,867 students
(7% of total 7-12 - assuming 43% of these will be served)
@ 35:1 ratio* = **196 teachers**

7-12 Teacher Demand = 5,409

Total LEP Teacher Demand = 22,947
Total Fully Credentialed Teacher Supply = 12,000 (approx.)

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*Teacher/Student ratios provided by the State Dept. of Education
**Includes Bilingual/Bilingual-Bicultural/Innovative Bilingual/Planned Variation
***Assembly Office of Research estimate

Bilingual Teacher Supply and Demand Projections

2000

K-6 LEP Population = 567,630
(Based on 70% of total LEP)

7-12 LEP Population = 243,270
(Based on 30% of total LEP)

Total LEP Population = 810,900
or 15% of total public school pop. (5.406 million)

K-6 Programs

Bilingual Classes**

289,494 students
(51% of total K-6)
@ 20:1 ratio* = **14,474 teachers**

Individual Learning Plans

221,378 students
(39% of total K-6)
@ 35:1 ratio* = **6,325 teachers**

Unserved

28,381 students
(10% of total K-6 — assuming
about 50% of these will be served)
@ 30:1 ratio*** = **946 teachers**

K-6 Teacher Demand = 21,745

7-12 Programs

Language Development Program

43,788 students
(18% of total 7-12)
@ 35:1 ratio* = **1,251 teachers**

Individual Learning Plans

182,454 students
(75% of total 7-12)
@ 35:1 ratio* = **5,212 teachers**

Unserved

7,298 students
(7% of total 7-12 — assuming
about 50% of these will be served)
@ 30:1 ratio* = **208 teachers**

7-12 Teacher Demand = 6,671

Total LEP Teacher Demand = 28,412
Total Projected Fully Credentialed Teacher Supply = 16,600 (approx.)

*Teacher/Student ratios provided by the State Dept. of Education

**Includes Bilingual/Bilingual-Bicultural/Innovative Bilingual/Planned Variation

***Assembly Office of Research estimate

NOTES: APPENDIX B

Assumptions used to forecast supply and demand projections:

1. Given recent trends, we assumed a growth in the limited-English school-age children population from the current 12.7 percent to 14 percent by 1990 and 15 percent to the year 2000.

2. We assumed no change in the current bilingual law with respect to program triggers and current estimated pupil/teacher ratios in both elementary and secondary programs.

3. We assumed that elementary and secondary students would continue to be served in the same proportions by the same mix of programs, with the exception of a 50 percent increase in service to the currently unserved population.

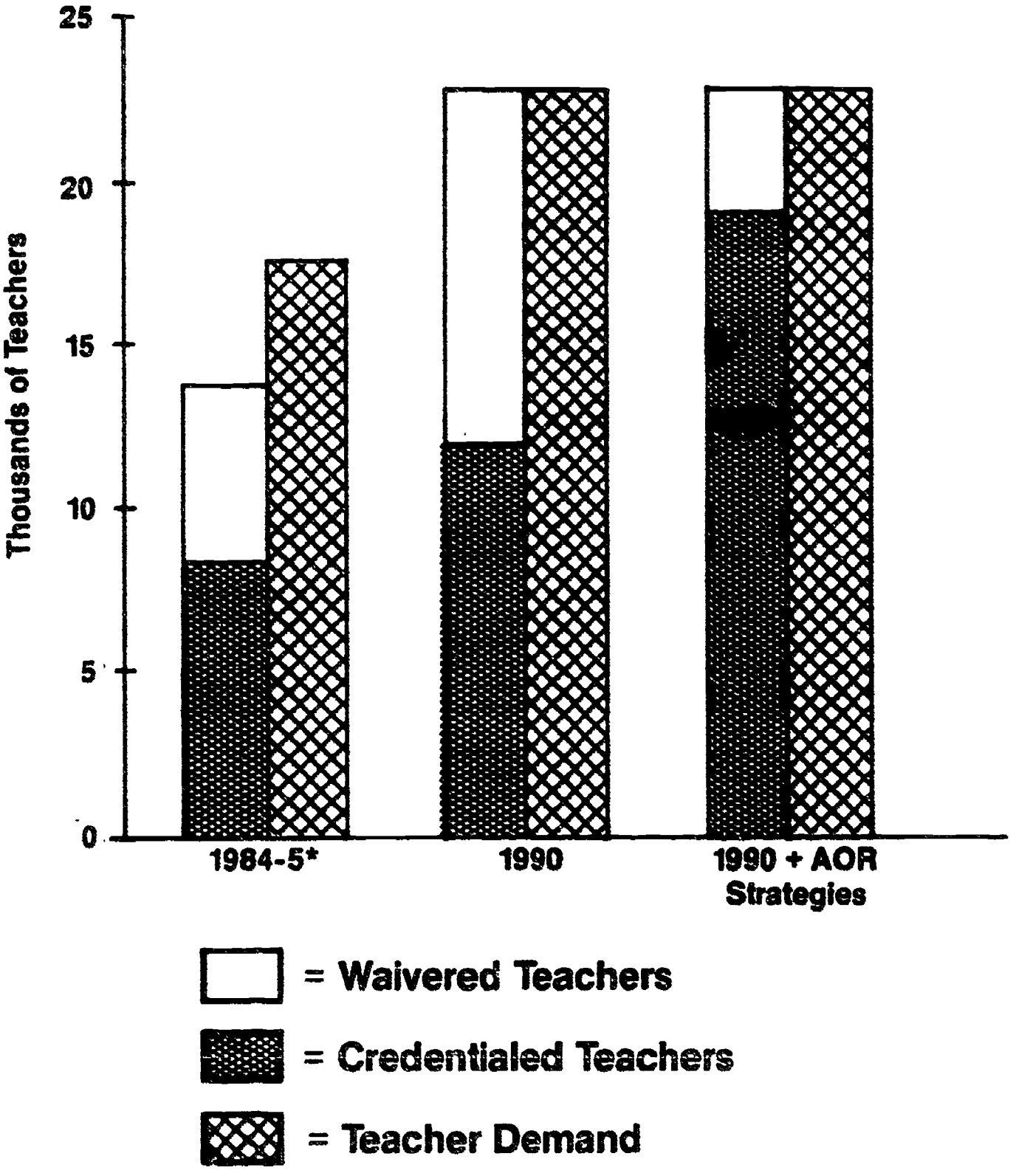
4. We assumed status quo with respect to overall population trends and program characteristics.

5. We assumed a 5 percent teacher attrition rate each year between 1985 and the year 2000.

6. Student enrollment projections are based on California Department of Finance Data.

7. Limited-English student enrollment for 1984-85 from California Department of Education

Bilingual Teacher Supply and Demand (K-12) 1985-1990



*Based on 1984-85 actual numbers of teachers and demand analysis.

REFERENCES

California. Department of Education, Office of Bilingual Bicultural Education. Bilingual Teacher Training Resource Guide. Sacramento, California, 1982.

California. Department of Education. Evaluation Report of Consolidated Application Programs 1982-83. Sacramento, California, 1984.

California. Department of Education. Report of Consolidated Application Programs, 1983-84. Sacramento, California, 1985.

California. Department of Education. Sunset Review Report on Economic Impact Aid: The State Compensatory Education Program. Sacramento, California, 1986.

Crawford, James. "Immersion Method is Fairing Poorly in Bilingual Study," Education Week. Vol. v, Number 30, April 23, 1986.

Gandara, Patricia, and Marta Samulon. "Factors Influencing the Implementation of Language Assistance Programs." Santa Monica, California: Rand Corporation, 1983, N-1940-ED.

Hakuta, Kenji. Mirror of Language, The Debate on Bilingualism. New York: Basic Books Inc. Pub., 1986.

Hernandez-Chavez, E. "The Inadequacy of English Immersion Education as an Educational Approach for Language Minority Students in the United States," in California. Department of Education. Studies on Immersion Education. Sacramento, 1984.

Lambert, W. E., and G. R. Tucker. Bilingual Education of Children: The St. Lambert Experiment. Rowley, Mass.: Newbury House Pubs., 1972.

Swain, M. "French Immersion Programs Across Canada: Research Finding," The Canadian Modern Language Review. Vol. 31, 1974, pp. 117-29.

Tierney, S. Dennis and Linda Bond. "Teacher Supply and Demand," Teacher Education Quarterly. Vol. 12, No. 4, Autumn 1985.

Tsang, Sau-Lim, Rosita Galang, Robert Lee, Linda Wing. Asian Bilingual Teacher Shortage in California, Problems and Recommendations. Report of the Preconference Institute of the 1985 California Association for Asian-Pacific Bilingual Education Conference. Oakland, California: ARC Associates Inc., November 1985.