

**Bilingual Education: Broadening Research Perspectives**

(Chapter 35)

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The United States was founded as a multilingual society. Bilingual education has existed in various forms for a variety of linguistic groups since that time (Fishman & Hofman, 1966; Kloss, 1977). While early efforts in bilingual education and present day bilingual programs in Canada promote the development of bilingualism as its goal, the majority of bilingual programs in the U.S. today promote bilingual education as a means to achieving the goal of literacy in English only.

The focus of this chapter is on research in bilingual education in the US, its history, practices and potential. The introductory section of this chapter will describe a variety of models of bilingual education (BE) and lay a foundation of terminology for those new to the field. The second section looks historically at research in the field of BE both in the development of evaluation research agendas and basic research on bilingualism to examine some of the forces which have influenced that research and have helped to shape the present state of BE. The third section contrasts two very different approaches to studying BE examining the design and methodology as well as the results and implications of these studies on the field. The final section suggests a new approach to looking at research in the field which looks to broaden the goals of bilingual education toward promoting a language rich society (Ruiz, 1988; Padilla, 1990) and

proposes an inclusive approach to research which brings the BE community into full participation in the research process and suggests a new role for the BE researcher.

The modern era of bilingual education in the United States may be dated back to 1963, to Coral Way Elementary school in Dade County, (Miami) Florida (Mackey & Beebee, 1977). This original bilingual program served an equal ratio of English to Spanish native speakers. The goal was to promote bilingualism among both groups of students. Each group received native language instruction in the morning and second language instruction in the afternoon with mixing encouraged through art, P.E., and music in the middle of the day. The program was deemed a success both in the development of language and content and in the affective domain as well. It improved attitudes across ethnic groups and enhanced the self esteem of students. Teachers and administrators observed that students were broadening their perspectives and preparing to contribute to their bilingual community (Mackey and Beebe, 1977). Despite the initial promise of the Coral Way experiment, the past thirty years have been fraught with controversy, resulting in a scattered variety of programs designed to serve the growing number of Limited English Proficient (L.E.P.) students. (The term LEP is controversial for both its deficiency orientation and the unfortunate auditory association with leper. It is, however, the official legal designation and most commonly used term for students who have not achieved a locally specified degree of proficiency in English. For this reason it will be used in this text with periods

between the letters encouraging the reader to read the letters independently.)

#### SECTION 1: MODELS OF BILINGUAL EDUCATION

From its auspicious beginnings in Coral Way, bilingual programs in the US have grown but do not come close to serving the approximately 6 million children between the ages of 5 and 17 whose home language is other than English (U.S. Census, 1990.) Nor do programs exist to accommodate the roughly 2.3 to 3.5 million L.E.P. school-age children (Aleman, 1993). Title VII (Federally funded bilingual programs) services reached just 290,000 students in 1993.

The term "bilingual program" has come to represent many different approaches to educating children who are acquiring a second language. (See Baker, 1993 for a comprehensive explanation of models used throughout the world.) These approaches may be characterized by the amount of native language utilized or the number of years the native language or mother tongue is supported. Native language may not be used at all by teachers but allowed by students (Immersion or Submersion), or it may be used sparingly as a vehicle to help students into the second language (Transitional Bilingual Education or TBE). TBE programs vary greatly in the amount of native language used and the length of time that language is maintained. Early-exit programs generally place students in English-only classrooms as early as first or second grade without fully developing literacy in the native language. Late-exit programs move children into English-only classroom after the fourth grade,

usually by the sixth grade. Native language may be encouraged and supported beyond the time when a student functions in English (Maintenance). The distinction between Late-exit and Maintenance programs is not always clear, local politics and policy may play a role in the choice of naming a program TBE, Late-exit or Maintenance. Dual language immersion programs also called two-way immersion programs or biliteracy immersion programs have the goal of maintaining the native language of language minority students and promoting the minority language among majority language students.

Programs may be further characterized by the second language usage patterns. Languages may be alternated every other day/week between languages. The native language may be developed in the language arts block and second language developed in the content areas as in the California case studies approach (Samaniego & Eubank, 1991; Crawford, 1989). Second language is often taught through the content areas by using strategies designed to increase students' ability to acquire the language (sheltered language approaches).

Programs may also be differentiated by their approach to staffing. Staffing patterns often vary with the linguistic proficiencies of the teacher and more specifically with the availability of bilingual teachers. Staffing patterns resulting from accommodations to the dearth of bilingual teachers include: 1) a waived bilingual program in which the teachers do not meet the qualifications to be considered fully proficient in language, culture or curriculum to teach language minority students but are granted a waiver due to shortages of such teachers; 2) a team teaching model

may team bilingual and monolingual teachers to meet the language needs of students; and 3) a bilingual strand/track provides a segment of bilingual classes within a monolingual school site with one or more bilingual teachers at each grade level or in multi-graded classes.

Alternatively, a program may be characterized by the goals of the program. Both TBE programs and Structured English Immersion programs have the eventual goal of students functioning in English-only classrooms. TBE programs have been the most prevalent approach in the US. A maintenance bilingual program continues to support the primary language of language minority students even after proficiency in English has been reached, striving for a goal of producing fully proficient bilinguals. A biliteracy program has the goal of developing students who are bilingual and biliterate, as in a Maintenance program, English is added to the curriculum rather than replacing the student's native language for instruction. A Dual Language Immersion program has the goal of bilingualism for students of both the dominant and minority cultures (Lindholm & Aclan, 1991). The minority language is the medium of instruction initially for the dual purpose of developing native language for language minority students and developing second language for language majority students, moving toward full bilingualism for both language groups. In this model English is used approximately 10% of the time in kindergarten and the percentage is increased each year until a level of 50% of instruction being offered in each language

The variety in approaches to bilingual programs is a response to the varied populations as well as the political, social and

educational objectives of different school sites. Communities vary not only in terms of the number and mix of students of various language groups, and the language capacity of the school system staff, but also in terms of the goals of the community for those students. These goals are determined, if not always articulated, by the community, the parents, the administrators as well as local, state and federal policy makers and the educational staff.

The role of bilingual education research in this context has been predominantly evaluative, confined to a narrow emphasis on determining the effectiveness of the schools to meet their goals, usually defined as English proficiency.

Most of the evaluation research to date has been an attempt to determine the best way to "do" bilingual education (Ramirez et al., 1991, Baker & De Kanter, 1983). These studies have looked at which model works best or which curriculum is more successful. Other research with more basic orientations has looked at specific aspects within the realm of bilingual education related to various theories such as second language acquisition (Snow, C. 1992), native language shift (Veltman, 1983, Hakuta & D'andrea, 1992) bilingualism and cognition (Ben Zeev, 1977a; Bialystok, 1987a & b; Diaz, 1983; Ianco Worrall, 1972; Peal & Lambert, 1962) , and cooperative learning (Johnson & Johnson, 1983; Kagan, 1986).

Looking toward improving the relationship of research to the policy and practice of bilingual education, it is important to reflect on what has influenced the field of research to date. The next section will look at the historical development of research agendas in bilingual education. In an attempt to adhere to the useful teaching

axiom, "less is more," the next two sections will cover the historical development of evaluation and basic research as well as the two studies to be compared in-depth rather than provide an overview of the literature on bilingual education. For broader reviews of research on bilingual education see: Baker (1993); Cziko (1992); Crawford (1989); Trueba (1989); Wong Fillmore and Valadez (1986); Ramírez et al. (1983,1990). (For further discussion on language issues see Minami and Ovando in this volume.)

## SECTION TWO: THE HISTORICAL DEVELOPMENT OF RESEARCH IN BILINGUAL EDUCATION

Historical reflection is an effective instructional approach (Arons, 1983) because it allows the student to see the development of knowledge as a fallible process rather than a fact to be accepted without question. Understanding the historical context can help us make informed decisions about what knowledge to accept as truth and what to reject. The history of research in bilingual education is a tale of many different social and political climatic forces and changes at work.

Research, whether basic or applied, is never independent from political influence. Most researchers need the backing of a funding institution. Such institutions fund research according to their own intellectual, social or political agendas. One important difference between basic and evaluative research lies in the constraints which shape research projects. Whereas evaluative research tends to be commissioned by government agencies at the whim of politics, basic research, which is initiated by individuals within the research

community, is primarily influenced by the intellectual climate of the times.

#### The Historical Development of Bilingualism and Cognition.

In this section the history of basic research in the area of bilingualism and cognition will be examined with an eye to its development, its impact on bilingual education, and possible areas for improvement in the relationship between basic research, policy and practice.

A look at the general context of research in intelligence that prevailed in the first half of the twentieth century provides a basis for understanding the research on bilingualism and intelligence conducted at that time (Gould, 1981). Binet, professor of psychology at the Sorbonne, was hired in 1904 to identify children who would not be successful in regular classes and who should be separated for special instruction. Binet developed a variety of tasks for children to perform which afforded the assignment of a "mental age" of the child. He was opposed to the notion of a fixed entity of intelligence and was vehement that his test not be used as a general intelligence test (Hakuta, 1986).

In America, however, through the efforts of Goddard (Goddard, 1917) and Terman (1926), Binet's work was turned into a general intelligence test which was used on immigrants and in the military in the early part of the century (with no regard for language proficiency, socio economic status, or literacy background) which added to the general belief of the time of the inferior intelligence of immigrant and non white populations (Hakuta, 1986).



This intellectual and social climate, one of belief in innate intelligence (nature over nurture) , and a lack of awareness of the impact of socio-economic status and language proficiency as confounding factors in testing; had a great impact on the research findings. In addition, the anti-immigrant attitudes of the society, particularly against southern European stock created a climate that supported such research (Higham, 1965). This was the social milieu surrounding research on bilingualism and intelligence in the first half of this century. It is not surprising that the extensive and rigorous (by standards of the time) quantitative research found negative consequences of bilingualism as related to intelligence. Baker, 1993, refers to this as the "period of detrimental effects". Baker extends the list of methodological flaws beyond linguistic factors into the bias in sampling procedures, and the analysis of the data using simple averages.

Inferior performance by bilinguals on IQ tests allowed the researcher to conclude that either the bilinguals were genetically inferior, as such hereditarians as Terman, Young, and Goodenough concluded (Hakuta, 1986) or that bilingualism caused retardation in the development of verbal skills as the language handicap notion suggested (Hakuta, 1986). In this context Saer (1924) studied English-Welsh bilinguals, Yoshioka (1929) tested Japanese-American bilinguals, Smith (1939) studied bilinguals in Hawaii. The studies compared bilinguals to monolinguals and bilinguals were found inferior. When the question of a language handicap was considered by researchers it was perceived either as a result of inferior intelligence (the hereditarian viewpoint) or a result of a negative

experiential influence (being raised bilingually). Neither school of researchers considered the inadequacy of the instrument used to measure intelligence. It is important to note that this deficit theory of bilingualism lingers in the present approach to bilingual education in this country. The very term Limited English Proficient and the notion of compensatory education and Transitional models of bilingual education are founded on this construct, that entering school with a different language background is a negative factor in school success. Early-exit programs and English immersion programs are based on the deficit notion that the native language is a handicap, learning occurs best in English and the sooner the better.

Research, as the next body of literature will show, has gone beyond the deficit notion, but that deficit has been institutionalized in our school culture, language (LEP) and practices and in the transitional model of bilingual education.

The research since the early 1960's on bilingualism and cognition has reported positive consequences of bilingualism (Ben Zeev, 1977a; Bialystok, 1981; Diaz, 1983; Ianco Worrall, 1972; Peal & Lambert, 1962). This research grew out of a very different sociological climate. In Canada, where bilingualism in French and English became a necessity, a new phenomena took place. The citizens of the dominant language group, English, were choosing to become bilingual and putting their children into French Immersion schools. This created a very different climate for research and a very different group of bilinguals to be studied. These were not lower socioeconomic status students, but rather the middle class. They were not new arrival immigrants, but the established dominant

class. The research that was spawned in this context yielded very different information on the relationship between bilingualism and intelligence.

Elizabeth Peal and Wallace Lambert (1962) set new methodological standards (of their time) in the research on bilinguals which required measuring language proficiency in both first and second language. They noted the importance of controls for both socioeconomic status and for language proficiency of bilinguals in research. They set methodological standards which required sampling only among "balanced bilinguals" with proficiency in both their first and second language (bias inherent in using "balanced bilinguals" will be discussed on page 00) and contrasted them with monolingual students from the same school. Both groups were middle class students. In the Peal and Lambert study (1962) the bilinguals outperformed the monolinguals on verbal and nonverbal measures particularly in tasks that required mental or symbolic flexibility. This was the first study to demonstrate the advantage of bilinguals in terms of "cognitive flexibility" (Hakuta, 1986). In the tradition of basic research many studies followed, building on the methodological standards and the theory of cognitive advantages to bilingualism developed by Peal and Lambert.

Diaz (1983) provides a comprehensive review of the literature on the studies that followed in the footsteps of the Peal and Lambert (1962) study which suggest the cognitive advantages of bilingualism. Diaz divides these advantages into the following: cognitive flexibility, linguistic and metalinguistic skills, concept formation, divergent and creative thinking. To move out of the deficit notion of

bilingualism it is important to build on the body of literature which suggests the cognitive strengths which bilinguals bring to the classroom.

Cognitive flexibility was a term coined by Peal and Lambert (1962) to describe the superior performance by bilinguals on a range of cognitive tasks including verbal and non-verbal measures of general intelligence. Peal and Lambert (1962) noted nonverbal advantages of balanced bilinguals were more apparent on tests requiring manipulation and reorganization of symbols, moreso than on tasks requiring perceptual or spatial abilities (Diaz, 1983). In a study with Hebrew-English bilingual children, Ben-Zeev (1977b) found bilinguals showed a superiority in symbol substitution and verbal transformation tasks. One such task had children substituting the word "spaghetti" for "I" necessitating sentences like "Spaghetti am cold" which violates the normal grammar rules. Ben-Zeev (1977) noted that bilingual children seemed more attentive to structure and detail as well as feedback from the experimenter. This notion of cognitive flexibility has potential for enticing dominant language students to become bilingual. What parent wouldn't want their child to increase their cognitive flexibility? More research in this area might define the term more clearly and provide more specific evidence of how this cognitive flexibility works.

A more widely researched aspect of bilinguals and cognition is the metalinguistic advantage of bilingualism. Case studies (Leopold, 1961; Ronjat, 1913) suggest that early bilingualism fosters advantages to both cognitive and linguistic development. Leopold suggests that bilingualism aids children in developing an early

separation of sound and meaning leading to an understanding of the arbitrariness of language. Vygotsky (1935/1975) suggested that bilingualism frees the mind "from the prison of concrete language and phenomena" (as cited in Cummins, 1976 p. 34). In a study of English-Afrikaans bilingual children, Ianco-Worrall (1972) administered a semantic-phonetic preferences test. When asked to choose between such words as cap, can and hat, children choosing cap and can would demonstrate a phonetic preference and those choosing cap and hat would demonstrate a semantic preference. Ianco-Worrall (1972) found that semantic preference increased with age and bilingual children showed semantic preferences at an earlier age than monolingual children.

A number of other studies on various groups of bilingual children have been conducted which support the metalinguistic advantage of bilinguals (Cummins, 1978; Lambert and Tucker, 1972; Hakuta and Diaz, 1985; Hakuta & Galambos, 1988; Bialystok, 1987 a and b). Despite a significant body of literature on the role of metalinguistic awareness in literacy development (Tunmer & Herriman, 1984), little work beyond Bialystok's has been done in bringing this work together with that on bilingualism and metalinguistic awareness. Such intersections of research agendas might yield information on issues raised by teachers concerning appropriate strategies for second language literacy.

Numerical concept formation is another cognitive area in which bilinguals seem to outperform monolinguals. Vygotsky (1935/1973) contends that language influences the development of new cognitive structures. The work of Liedtke and Nelson (1968) and Bain (1974)

tested bilinguals versus monolinguals concept formation of linear measurement concepts and additive rules in number strings respectively and found support for the notion that bilinguals were superior to monolinguals in these areas of concept formation. Further research in the relationships between bilingualism and numerical concept formation might yield new pedagogical approaches in working with bilinguals. Future research might pursue ways to capitalize on these possible advantages of bilingualism.

Just as negative associations between bilingualism and cognition were based on faulty methodological practice, the research on cognitive advantages has been criticized for its methodological shortcomings (Reynolds, 1991): The use of "balanced" bilingualism may be confounded with innate cognitive ability. The lack of randomness of the sample is another methodological flaw that is hard to overcome (Reynolds, 1991). The cognitive advantages shown by balanced bilinguals may indicate a bias caused by such factors as parental attitudes, experiences, and motivation (Baker, 1993). The cause and effect relationships is hard to determine. Are the cognitive advantages due to bilingualism or is the balanced bilingualism a result of cognitive advantages? Hakuta (1986) also questions how much the researcher's motivations may determine the results of the research. Despite these flaws, the positive consequences show what is "possible" with balanced bilinguals under positive circumstances and this line of research merits further attention.

This brief look at the development of basic research in the area of cognition and bilingualism reveals the limitations as well as the

potential role of basic research in bilingual education. Theories are shaped by the historical and social context of the time as well as the intellectual pursuits of the researcher. As theories develop, the underlying biases as well as the methodological rigor with which the theories are tested in different settings must be examined. Many minority language parents still fear that time spent in native language instruction will retard their child's progress in English. Majority language parents might be more interested in placing their children in bilingual programs if findings of such advantages were common knowledge. The studies which followed Peal and Lambert in the area of cognition and bilingualism are little known beyond the bilingual research community nor are most educators aware of the historical evolution of the deficit theories that have been institutionalized in the school system. Even teachers who are aware, for example, of a possible metalinguistic advantage of bilingualism, generally do not see its relevance to pedagogy. As theories such as those regarding bilingualism and cognition develop they should be brought to the educational community to discuss what implications such theories might have and how those implications might be studied in the context of the classroom. This approach to research will be discussed further in the final section of this chapter.

#### A History of Bilingual Education Program Evaluation Research

The historical perspective on bilingualism and cognition above provided some insights into what might be considered "macro-level" encroachment of the prevalent social and political views into the conduct of basic research. The relationship there between politics

and research that we reviewed will appear quite indirect and distal when compared to the more direct influences of politics in the area of program evaluation in bilingual education in the United States.

From its relatively early stages as a federal program, as Title VII of the Elementary and Secondary Education Act of 1968, bilingual education has been host to ideological drama. A major climax of sentiments about bilingual education were expressed in a monograph by journalist Noel Epstein (1977) who labeled the bilingual education movement as one of "affirmative ethnicity". Evaluation research on the question of the effectiveness of bilingual education programs also reached an early crescendo in January, 1978, with the release of a study funded by the Department of Education, conducted by the American Institutes of Research (AIR), titled "Evaluation of the Impact of ESEA Title VII Spanish/English Bilingual Education Program" (American Institute for Research, 1978). With reauthorization of ESEA scheduled for that year, the main question underlying the AIR study was whether bilingual education programs were, on average, more effective than ESL programs. The results indicated that there were few program effects. Bilingual education advocates were quick to point out, among other things, that the study did not come to grips with the quality of the bilingual programs (Gray, Convery & Fox, 1981). Despite its many shortcomings, the study succeeded in stirring up doubts about the effectiveness of bilingual programs, and contributed to a broad perception of the program as being a jobs program for Hispanic educators rather than a serious pedagogical innovation (see Epstein, 1977).



The 1978 amendment to the Bilingual Education Act, in large part reacting to the AIR study, included a new section on research instructing the Assistant Secretary of Education to "coordinate research activities of the National Institute of Education with the Office of Statistics and other appropriate agencies in order to develop a national research program for bilingual education" (Sec. 742). Thus, in Spring, 1978, an Education Division Coordinating Committee was established to implement the broad mandate, and came to be called the "Part C Committee" named after the section of the legislation requiring its establishment. The committee was chaired by the Deputy Assistant Secretary for Education Policy Development, and included representatives from the National Institute of Education (NIE), the National Center for Education Statistics (NCES), the Office of Education (both the Office of Bilingual Education and the Office of Evaluation and Dissemination), and ad hoc representatives from the Office of the HEW Assistant Secretary for Planning and Evaluation.

The memo identified three areas where research might be directed: investigation of various national needs for bilingual education; research to improve the effectiveness of services for students; and research and evaluation to improve the management and operation of the Title VII program (Education Division, U.S. Department of Health, Education, and Welfare). In the area of service improvement, the following research studies were specified:

- "(b) (1) studies to determine and evaluate effective models of bilingual-bicultural programs;
- (2) studies to determine
  - (A) language acquisition characteristics and

- (B) the most effective method of teaching English  
(in a bilingual-bicultural program);
- (3) 5-year longitudinal study [On the effectiveness of  
this title];
- (4) studies [on]. . . methods of [identifying children  
needing services];
- (6) studies [on]. . . teaching reading to L.E.P. children and  
adults;
- (8) studies of . . . teaching about culture."

The Part C Committee ended up embodying the tensions underlying the debate over what type of research would ultimately prove most useful for policy purposes. NIE's emphasis was on basic learning and instructional processes, whereas the Office of Evaluation and Dissemination emphasized effectiveness of on-going programs.

-- Insert Table 1 about here --

A major backdrop to these tensions was the status of the Lau remedies which had been proposed by the Office of Civil Rights in 1975 in response to the 1974 Supreme Court decision supporting the rights of L.E.P. children to special assistance to enable them to participate equally in the school program. Although they had never been proposed as regulations, they were used as such and served as the basis to negotiate remedies with hundreds of school districts (Crawford, 1989). In the Lau remedies, bilingual education was the method of choice. The main question facing the Part C committee was what evidence it could gather to shed light on whether it was

wise to prescribe bilingual education, and whether this policy could be reinforced through the types of programs that could be awarded under Title VII.

It would probably be accurate to say the NIE approach enjoyed the initial advantage. The program started in 1979, still in the middle of the Carter Administration, and NIE was still a strong agency within the Department of Health, Education and Welfare. Thus, soon after its inception, in 1979, it commissioned a major four-year study to look at the characteristics of effective bilingual practices. Considering the hailstorm of criticism that followed the AIR study, it was probably wise for even the critics of bilingual education to enable data collection on the basics of program functioning.

Issuance of the proposed Lau regulations was delayed by the Carter Administration until August 5, 1980, as Carter struggled for re-election. The proposal mandated bilingual education in schools with at least 25 L.E.P. students from same-language groups in K-8. This was a controversial proposal, but one popular with the Hispanic constituencies that Carter desperately needed, albeit not sufficient to overturn the tide of politics. The proposed regulations were withdrawn by the Reagan administration on Feb. 2, 1981. Secretary Bell, called them "harsh, inflexible, burdensome, unworkable, and incredibly costly," and criticized native language instruction as "an intrusion on state and local responsibility" (Quoted in Crawford, 1989, p. 42). "We will protect the rights of children who do not speak English well, but we will do so by permitting school districts to use

any way that has proven to be successful" (Quoted in Crawford, 1989: p. 42).

As early as September of 1981, Bell's statement was bolstered by Department analysis. An internal document circulated by the Office of Planning, Budget and Evaluation staff Keith Baker and Adriana De Kanter, titled "Effectiveness of Bilingual Education: A Review of the Literature", called into question the wisdom of a single approach. Baker and De Kanter collected studies that compared bilingual education approaches with a non-bilingual comparison, and concluded that there was no evidence to support the department's policy of requiring Title VII grant programs to be reserved for bilingual programs.

The Baker and De Kanter document was criticized on a number of grounds, including the underhanded way in which it was leaked to the press and Congressional staff without the benefit of external review. Indeed, the paper never became an official Department document, and was rendered into a document suitable for citation only through non-official channels, when Baker and De Kanter included it in a book published along with other Department of Education analyses on bilingual education (Baker & De Kanter, 1983). In addition, flaws in the method of summarizing across studies has been questioned - - in fact, a subsequent re-analysis by Willig (1985) of the same studies summarized by Baker and De Kanter using meta-analysis showed positive effects of bilingual programs. Nevertheless, the document through its timeliness served to strengthen the position that there should be no federal prescription of bilingual education.

By 1982, the Department of Education, in particular the Office of Planning and Evaluation, was fully engaged in formulating research to reinforce this position. Two major Requests for Proposals (RFPs) were issued that year (US Department of Education, 1982) and funded the following year. The first was titled "Longitudinal Study of Immersion and Dual Language Instructional Programs for Language Minority Children", funded for a five-year period from December, 1983 on a budget of \$1.4 million in its first year. The justification section of the RFP (US Department of Education, 1982) for this study borrowed text heavily from the Baker-De Kanter document, and sought to compare traditional forms of bilingual education with English Immersion, using a traditional treatment-comparison design. This study is reviewed in greater detail later in this chapter.

--Insert Table 2 about here --

The second RFP was for a "National Longitudinal Evaluation of the Effectiveness of Services to Language Minority, L.E.P. students", funded for a five-year period starting in September, 1983, on a budget of \$1.5 million in its first year. This RFP (US Department of Education, 1982) noted the AIR study as well as the Baker-De Kanter analysis, referring to it as "an attempt to synthesize results from diverse research studies [that] demonstrated again the importance of complete documentation of service, school, child, and home characteristics for drawing conclusions about service effectiveness." It went on to note that "[a]l though in the past such evaluations may

have been appropriate for the Department, this is not the case now. For the Department to formulate federal education policy regarding services provided to language minority limited English proficient students in a time of decreasing federal monies and regulation, a comprehensive information base is required -- a base containing information about the broad range of services being provided to such students" (US Department of Education, 1982, p.1). The purpose of the study would be to provide a comprehensive, nationally representative picture of the types of services provided to L.E.P. students, and to conduct a longitudinal study that might enable extraction of factors that contribute to successful outcomes of such programs.

These two evaluation studies comprised the Department's major effort at understanding program effectiveness. The value of this ambitious approach and the technical merits of these studies were analyzed by a National Academy of Sciences panel (Meyer & Fienberg, 1992), and will be described in our review. These studies were controlled by the Office of Planning and Evaluation (OPE) rather than NIE or OBEMLA, and represented a fundamental shift in bureaucratic power as well as a research paradigm, from a basic to an evaluation orientation. The shift was true across the department during this time period, as can be seen in Tables 1 and 2, based on the department office controlling studies related to bilingual education (Part C funds), as reported in official department publications, (National Clearinghouse for Bilingual Education, 1982,1984). As seen most clearly in Table 1, NIE's control of studies peaked in 1981, paralleling the demise of the agency, and by 1983,

OPE with its program evaluation orientation controlled the bulk of the department's activities.

These brief passages through the history of bilingual education research in the areas of both basic research and program evaluation lays the context for looking at two very different approaches to evaluation research in the field of bilingual education.

### SECTION THREE: ANALYSIS OF TWO APPROACHES TO BILINGUAL EDUCATION RESEARCH

In this section the complex nature of design issues and methodological difficulties will be looked at more carefully in a comparison of two federally funded studies which represent very different approaches to research. The Significant Bilingual Instructional Features Study (SBIF) is a three year study of five different ethnic community bilingual programs (Tikunoff, 1983). The Longitudinal Immersion (1992) study is a five year longitudinal evaluation study of three Spanish language bilingual programs. The Significant Bilingual Instructional Feature Study

The Significant Bilingual Instructional Feature study (1980-1983) was designed to look at the successful instruction of L.E.P. students. This study attempted to determine the requirements for L.E.P. students to function proficiently in accomplishing instructional tasks. This study took place in diverse cultural settings, yet because of a strong theoretical framework and clear operational definitions, the findings from these unique contexts are both credible and generalizable.

The SBIF study was a two part study. The first part studied 58 bilingual teachers and 232 L.E.P. students during ten full days of instruction. Five instructional features were described and identified as being "significant". To be "significant" means: a) The feature had to have been identified in the research literature as positively impacting instruction for L.E.P. and other students. b) It had to occur frequently and with high quality in each of the 58 classes. c) Teachers had to identify the feature during analysis of their instructional protocols. d) The feature or a cluster of features had to be associated with positive outcomes for L.E.P. students.

Despite great diversity in districts, programs, and classrooms, five instructional features were found to be significant, appearing frequently, consistently and with high quality. These are the five significant features found:

1. Successful teachers utilized "active teaching strategies. These active teaching behaviors included a) Clear communications during instruction, clear descriptions of tasks and appropriate strategies for explaining, clarifying and organizing information were used. b) Teachers maintained students' engagement in instructional tasks, keeping students focused, appropriately pacing instruction and clearly communicating expectations. c) Teachers monitored students' progress and provided immediate feedback to students.
2. Successful teachers used both primary and second language to mediate instruction alternating between the



languages to increase student understanding of the instruction.

3. Successful teachers integrate English language development with academic skills even when L1 is used for some of the instruction.
4. Successful teachers incorporate the home culture into the classroom including references to the culture, building on cultural discourse modes and observing the values and norms of the L.E.P. students' home culture while the majority culture norms are being taught.
5. Successful teachers have congruency between their instructional goals, organization and delivery of lessons and student outcomes. They communicate high expectations for L.E.P. students and have confidence in their ability to teach all students. ( See Tikunoff, 1985).

These five instructional features resulted in L.E.P. students being able to understand and acquire the skills and concepts that their teachers expected. They knew what was expected during instructional tasks and were able to achieve a high rate of accuracy and obtained appropriate feedback when necessary. While the findings of this study are not earth-shattering in terms of revealing new information, they are indeed credible because of the rigorous design of the study with respect to its objectives. An essential feature of the SBIF study was the operationalization of terms. By creating succinct definitions of classroom experiences researchers were able to make sense of the behaviors they were observing. After dividing instructional tasks into distinct types they were able

to measure success of L.E.P. students based on competence at these tasks.

According to their definition, Student Functional Proficiency (SFP) was determined by demonstrated participative, interactional and academic competence in a classroom conducted primarily in English. This, by the way, reflects the prevailing deficit perspective of bilingual programs, as a student was considered deficient (not functionally proficient) unless that student functioned in the absence of the primary language.

Concise definitions of terms can serve research. However, the definitions themselves are susceptible to the same biases that limit all theoretical constructs. For example, one of the ways the SBIF study measures student participation is in terms of Academic Learning Time (ALT). A student's academic learning time consists of a) the amount of time the teacher allocated to a subject area; b) the proportion of this time a student is engaged in completing tasks in the subject area and c) the proportion of time a student achieves high accuracy in task completion. Such a definition reflects the time-on-task (time-on-task theory will be discussed further in regard to the implications of the Ramirez et al report) pre-occupation of its day and a value of high accuracy on defined tasks. As the focus of educational research has shifted from product to process the usefulness of these constructs have been questioned. The definition of ALT is no longer informative.

A number of effective strategies pointed out by the SBIF study, have found their way into common use. One such strategy was the *integration of English language development with content instruction.*

Writes Tikunoff, "Students learn the language of instruction while engaged in completing class tasks while using that language. . . . proficiency is best developed with relation to learning the language of instruction while learning to participate competently in completing class tasks" (Tikunoff, 1983 p. 35).

Another important mediation of effective instruction found in the SBIF study is the use of students' home cultural information to enhance instruction. One example cited was the use of the term "mijito" (my son), by a Hispanic teacher to soften a reprimand of a young male student. This use of home cultural information included the home versus school discourse patterns of students from differing cultures. Teachers of Chinese L.E.P. students, for example noted the importance of teaching students to proceed independently not waiting for instructions from an adult. Navajo teachers were careful not to assign boys and girls from the same tribal clan to the same reading groups. Hispanic students were encouraged to work cooperatively, in keeping with the values of the home. This is an example of a feature which is unique to each cultural context, but the use of such a feature is generalizable across contexts.

The SBIF study was able to look at a variety of bilingual programs in very diverse settings. It had specific criteria for identifying features that cut across the diversity of contexts. It also had clearly developed theory of what constituted success of L.E.P. students in any bilingual setting. This clarity of criteria and underlying theory are necessary to create clear standards of measurement which allow generalizability across what would otherwise be viewed as unique, context embedded programs.

One of the methodological concerns of the study was the identification of effective classrooms by nomination rather than by student outcomes. The study proposed that if teachers were nominated by their administrators and peers as effective and if they met the ALT standards, then they should be deemed effective classrooms. Tying effectiveness to student outcomes would have created a stronger base from which to derive effective practices. However, lack of availability of decent outcome measures, particularly ones that could be applied in diverse contexts, is one of the problems that continues to plague the field: Available measures generally focus on low level skills and are out of synch with current instructional practice. There are also no reliable measures available in the native language for most language minority groups.

The SBIF study validates what effective teachers are doing regularly, can articulate and generally agree on, and which have already been discussed in the literature. It also provides frames for looking at the classroom and instruments for measuring success. It does not allow us to go beyond the fairly obvious successful classroom practice, however, to the complexities of why teachers use these strategies and why they are successful. In fact, the initial constructs served to greatly limit the findings. Any classroom innovations that have not been previously discussed in the literature would not appear significant even though they might be related to positive outcomes. Such strict constructs for significance did not allow the study to report much beyond what was generally known and accepted in the field. Such research often receives the response, "So tell us something we don't already know." Validation, however, is

important. This study said to bilingual educators in effect, "You're going in the right direction. Using native language; bringing in students' culture to the classroom, teaching language through content is what effective bilingual education looks like." This study also contributed a useful lexicon for observing classroom behaviors. Clarity of theory and operational definitions allowed for information from diverse classroom contexts and cultures to generate data which could be brought together to create basic constructs significant in effective bilingual classrooms. This approach stands in great contrast to many of the evaluative studies which operate on a more traditional program comparison design.

#### The Longitudinal Immersion Study

A more recent study compares the effects of three types of bilingual programs (Ramírez, Yuen, Ramey & Pasta, 1990). The Longitudinal Immersion study was commissioned as a direct result of the findings of a federally funded study (1980) on TBE programs, the Baker & De Kanter report. After reviewing more than 300 studies of TBE programs Baker and De Kanter found only 28 that met their research standards (Crawford, 1989). Based on these studies Baker and De Kanter found:

Although TBE has been found to work in some settings, it also has been found ineffective and even harmful in other places. Furthermore, both major alternatives to TBE - structured Immersion and ESL - have been found to work in some settings. (In Crawford, 1989. p. 95)

This five year Longitudinal Immersion study was originally set up to compare the relative effectiveness of English Immersion with the more traditional Transitional bilingual education model, the Early-exit bilingual program. The comparison of Late-Exit bilingual programs was later added by the researchers, for the purpose of greater contrasts in the comparison. The study set criteria for each of the program types in terms of the use and amount of primary language: In Immersion programs English is used exclusively for instruction though teachers were bilingual and occasionally used primary language to help students. Early-exit programs use the primary language as well as English for instruction and children are mainstreamed into English-only programs within two or three years after entry into the program. Late-exit programs use both primary language and English for instruction but use may be differentiated by the teaching staff (teacher A used one language and teacher B used another) and primary language is used at least 50% of instructional time. Children are not mainstreamed into English only classes until after fifth or sixth grade.

The schools were located through a telephone network which called state departments of education and other educational agencies to recommend programs of the three different types. Immersion and Early-exit programs were only chosen if they occurred together in the same school or district. It was found that districts with Late-exit programs offered no alternative program so were chosen independent of a comparison program. The Four sites that were chosen after on-site visits and agreement to participate in the Immersion and Early-exit studies were located in Texas and

California. A design problem began at this point when one of the states pulled out of the study and there was not adequate representation of all three models in any one state.

In the Immersion and Early-exit programs cohorts of Kindergarten and first-graders were chosen to be followed for five years. In the Late-exit program kindergarten and third grade cohorts were selected. This particular design was chosen to test the facilitative effects theory which suggests that instruction in the L.E.P. child's primary language become apparent after grade four (Ramírez et al. 1991). The rationale for the difference in cohorts between programs was that in the Immersion and Early-exit programs children would be mainstreamed rapidly and this design would allow the study to follow students after a year or two in the mainstream classroom. The Late-exit programs did not mainstream their students until fourth or fifth grade. New kindergarten and third grade cohorts were begun in the second year of the study and a new site was added during the second year. In the Immersion program all schools (except in one district) and all kindergarten and first grade teachers within those schools implementing the Immersion strategy program participated. The Early-exit and Late-exit sites were chosen arbitrarily by program administrators. The potential for bias in such choosing is clear. More design problems.

Test scores on standardized tests in English (California Test of Basic Skills) were given in the fall and in the spring as the primary measures of student growth. A statistical method called Trajectory Analysis of Matched Percentiles (TAMP) was utilized to compare the change in test scores of groups of students. This method for creating

growth curves was utilized to compare student growth across cohorts even though students in the cohorts were not necessarily in the same grades. TAMP is a graphical tool for comparing change from cross-sectional data. It allows two populations scores to be compared as a whole rather than pairing individual student scores. It is a useful explanatory way of comparing growth curves when two groups are comparable. Unfortunately, comparability was did not exist in the Immersion study (Meyer & Feinberg, 1992). In the Late-exit programs student cohorts may have been in third through sixth grade while Immersion and Early-exit cohorts were available only in K through third grade. This statistical growth curve was used for the comparison of projected growth curves across groups in different grade levels. A fancy statistical device cannot save a poor design.

Which program was more effective? Effectiveness was measured by student scores on tests in English language arts, reading and mathematics, all administered in English. Students in the Immersion and Early-exit programs were compared directly (as they occurred within the same schools and districts). All three groups were compared to the norming population. The conclusion reached was:

There appears to be no difference in the academic growth relative to the norming population between Immersion strategy and Early-exit students. Moreover, the form of this growth (in the years through the third grade, when comparison of all three programs is possible) is similar to that found for Late-exit students. (Ramirez et al., 1991, Vol. II, p. 641)



A number of methodological problems give cause for some concern as to the generalizability of these findings. The Late-exit programs could not be compared to the Early-exit and Immersion programs because they did not occur in districts or states where the other programs occurred (Cazden, 1992; Meyer and Feinberg, 1992). The effects of school or district cannot be considered. In addition, the Late-exit programs had great differences in the amount of English used after the fourth grade (60%, 75%, and 94%). This brings into question the validity of grouping the Late-exit programs together after fourth grade.

As a study of this magnitude (eight years and 4.3 million dollar) warrants, analysis and critiques of the study abound. In 1990 the United States Department of Education requested the National Academy of Sciences to review evaluation studies in bilingual education. The resulting publication, *Assessing evaluation studies: The case of bilingual education strategies* (Meyer & Fienberg, 1992) does a thorough analysis of the Ramírez et al. study. Three of the conclusions of this report merit particular attention:

- The formal design of the Study was ill-suited to answer the important policy questions that appears to have motivated it.
- The absence of clear findings in the Immersion Study that distinguish among the effects of treatments and programs relating to bilingual education does not warrant conclusions regarding differences in program effects, in any direction.

- Taking fully into account the limitations of the study, the panel still sees the elements of positive relationships that are consistent with empirical results from other studies and that support the theory underlying native language instruction in bilingual education. (Meyer and Feinberg, 1992 p. 104).

These points represent concerns over both design and implications of the study. The design of this study was doomed from the beginning. The addition of Late-exit programs for purposes of greater contrast, though well-intentioned, left the study wide open for criticism. The Late-exit programs were not found in districts with Immersion and Early-exit programs prohibiting within-district and within-school comparisons and allowing for confounding district or school variables. In addition, one Late-exit program is a six year program and the other two programs are only three to four year programs. Comparisons of students in the cohorts could not be made except through the TAMP comparison of growth curves which was not an appropriate use of TAMP.

Dolson (1992) also questions the particular Early-exit-bilingual programs which were chosen as they utilized such a small amount of native language instruction when Early-exit programs exist which utilize native language to a much greater extent and would provide a greater contrast to structured Immersion. Allowing programs to be compared according to their names rather than according to strict criteria which distinguish between programs creates muddled results. The lack of theory as the basis for the design was also criticized (Baker, 1992, Meyer and Feinberg, 1992).

...explicit theory of bilingual education, including explicit objectives, is required to both motivate and structure the sensible statistical design of a study to evaluate alternative forms of bilingual education (Meyer and Feinberg, 1992 p. 90).

Baker (1992) suggests it is "bad theory" rather than no theory that guided the study. The assumption of the facilitative theory (first language learning facilitates second language learning) and the threshold hypothesis (a certain "threshold level of L1 is needed to have facilitative effects in L2, Cummins, 1978) he argues, were the theoretical assumptions that lead to the findings that Late-exit programs had a greater effect. He concludes that the data suggest the opposite, that the greater effect in the early grades should be recognized.

Had the study set out to disprove the time-on-task theory with regards to second language acquisition the study design could have been much cleaner. The time-on-task theory, promoted by anti-bilingual education forces, would suggest that the more time a student spends in English the greater the success in English. Programs would have been differentiated by the amount of time students spend in instruction in English and the results would have been hard to dispute. In fact, despite the design problems created by the absence of theory, findings from the Ramírez study should put this time-on-task theory to rest (Baker, 1992; Cazden, 1992). Students in Immersion programs and Early-exit programs did not do any better and in some regards did worse on English tests than students in Late-exit program which utilized considerably less

English. In an attempt to counter this argument, Baker (1992) offers instead a "spaced practice" theory which suggests that giving students breaks in learning a second language by providing them with "rest breaks" in their native language would better explain the data in the Ramírez study.

Another design criticism was the limitation of Immersion programs to those which taught Spanish language speakers only (Rossel, 1992) and those whose teachers were bilingual in Spanish and English (Dolson, 1992). Rossel suggests that the majority of Immersion programs contain a variety of language groups and, in fact, are most appropriate in those situations; and Dolson (1992) points out the impracticality and inappropriateness of utilizing bilingual teachers (whose language abilities are in great demand) in Immersion programs that place little demand on the use of the students' primary language. Those realities notwithstanding, Ramírez et al. limited the bias in the study by choosing programs that differed only in the amount and extent to which the native language was utilized rather than confounding the study with other language groups or with teachers incapable of understanding student responses or communicating with parents.

Despite the need for longitudinal information, such studies are by nature fraught with design problems (Collier, 1992). The attrition of students, as occurred in this study, is the greatest problem in longitudinal studies, particularly with L.E.P. students, who move frequently. In addition, the lack of fidelity of treatment in a program in which students progress through different teachers over the years muddies the findings. In the Ramírez study one of

the Early-exit programs more closely resembled an Immersion program in terms of amount of native language instruction used and one of the Late-exit programs abruptly transitioned students into English at the fourth grade. Again, lack of a theory, such as time-on-task, or lack of strict adherence to criteria and definition, such as amount of native language spoken, would have averted this problem. In addition, the inescapable problem of lack of random assignment of students or teachers to bilingual programs will plague any experimental design of bilingual programs.

There are concerns regarding the implications of the study which come from a variety of directions. The concern voiced by the panel to review evaluation studies of bilingual education programs (Meyer and Fienberg, 1992) suggests we should not interpret the results as supporting or denying the benefits of any of the treatment groups. Yet such interpretations will be made. Some will interpret the findings as supportive of Late-exit programs. Dolson writes:

Of the three program models investigated in the Longitudinal Study, the Late-exit design appears to be the most effective in reversing the negative educational outcomes experienced by many language-minority students in the United States. (Dolson, 1992 p. 145).

Others will find support for negative interpretations of current theories. Notes Baker:

Ramírez et al.'s arguments favoring Late-exit programs are grossly speculative and contradicted by their own data. They are interesting only because they provide a degree of fit with the facilitation hypothesis. If the

facilitation hypothesis were a decent theory, we might be able to overlook the weaknesses of Ramírez et al.'s analysis, but the facilitation hypothesis is so lacking empirical support in the literature that it merits no further consideration (Baker, 1992, p. 84).

Rossel (1992 p. 183) comments:

It could also be inferred from this study that we ought to get rid of all special language acquisition programs, since they are expensive and they appear to be no better for L.E.P. students than regular classroom enrollment with ESL pull-out. I infer this from the fact that the most common finding of the studies comparing ESL pull-out to Transitional bilingual education is that there is no difference between the two (Rossel & Ross, 1986; Rossel 1990). If there is no difference between Immersion and bilingual education and no difference between bilingual education and ESL pull-out, it is not unreasonable to assume that there is no difference between Immersion and ESL pull-out, although they were not compared directly in this study (Rossel, 1992 p. 183).

It is clear from the varied responses that the Ramírez study findings will be interpreted within the context of the theoretical framework of the reader of those findings. The panel to review evaluation studies of bilingual education (Meyer & Feinberg, 1992), provides a more reasoned perspective. These findings, though not necessarily statistically significant, should be reviewed in the context of their trends in supporting other findings in the

literature. Despite the problematic nature of the research design to the questions being researched, we can still learn some things from this study. McLaughlin made this point regarding studies in second language acquisition that apply to the Ramirez et al study:

It can be argued that a great deal can be learned from less than perfect research and less than fully generalizable findings. If one accepts the notion that knowledge in social science grows by accretion, every bit of information contributes to the process. What one must avoid is misinformation, and the more rigorous the research and the more careful the researcher is to deal with the problems that have been discussed here, the greater the contribution to knowledge about the effects of bilingual education (McLaughlin, 1985, p. 245).

The Ramirez et al. study, due to its problematic design, could not answer the policy questions regarding which bilingual education treatment is more effective among the three models described, nor does it answer pedagogical questions such as how and when second language should be introduced. It does, however, present some findings that are worth pursuing in future research for their pedagogical implications.

In looking at the characteristic differences between programs, the amount of relative use of English and Spanish by teachers and students was the most salient. In the Immersion strategy program teachers used English at least 97% of the time at all grade levels. In the Early-exit program English was used approximately 66% of the times in kindergarten and first grade. English use in grade two was

75%, grade three was 80% and grade four was 97% of the time. In contrast the Late-exit program used English less than 10% of the time in kindergarten, increasing to 33% for grade two, 50% for grades three and four, 64% for grade five and 80% in grade six. In all grades of the Late-exit programs student patterns of language use were similar to that of the teacher. The authors summarized this information to suggest that across grade levels and within programs students tend to mirror the patterns of language use of their teachers (Ramírez, 1991). As suggested earlier, time-on-task theory of learning English would predict according to these usage patterns that Immersion programs students should excel on the tests. Such was not the case. Results on tests of English at the upper grades were very similar. There was actually surprisingly little difference in the lower grades though late-exit student had not yet received literacy instruction in English.

Teachers across programs tend to say the same things to students regardless of language proficiency, yet the discourse patterns may vary depending on the group being spoken to: Teachers speaking to heterogeneous groups (L.E.P. and Fluent English Speaker (FEP) / English Only (EO) mixed ) consistently explained and modeled more than when they spoke to single language groups. Single language groups (L.E.P.-only and FEP-EO-only) were questioned almost twice as often and received more feedback. The implications of these behaviors for student learning invite more research.

All programs presented teacher dominated, passive language learning environment. From the standpoint of minimizing the



variability between programs in the study, this was positive. However, from a pedagogical standpoint, this was a dismal finding (Cazden, 1992). Though this pattern of teacher dominated talk and low level questioning strategies is one that has been found to be prevalent in many classrooms (Cazden, 1984, Lemke, 1990) it is particularly inappropriate for classrooms where a major objective is second language development. Further research into the quality of the language learning environment coupled with greater dissemination of findings, would help to advance pedagogy in this area.

Teacher qualifications were a variable which distinguished Late-exit programs from Immersion and Early-exit programs. Late-exit teachers were more proficient in Spanish and had greater education and training to work with language minority children. Qualitative data on why Late-exit teachers were more highly qualified would be useful. Is it the presence of proficient and trained teachers that encourages the existence of Late-exit programs? Do Late-exit programs encourage teachers to become more proficient and better qualified? Do communities that foster Late-exit programs also encourage the development of bilingual professionals? What motivates teachers to receive greater levels of training? This is an area of research that warrants further study.

Parent involvement in the Late-exit bilingual programs was greater and there was more homework assigned in the Late-exit program. Such variables could be considered a bias of the study (Rossel, 1992) or could be considered as a discovery of features which distinguish between programs. A reasonable theory might

suggest the following: When teachers are more proficient in the language of the parents, parents would feel more comfortable and involved in the program. Involved parents would be more apt to understand assignments in their native language and participate in homework, making homework a more valuable and effective strategy. Recent studies on parent involvement (Snow, Barnes, Chandler, Goodman & Hemphill, 1991 and Moll, 1991) suggest that parent involvement is a benefit for language minority students. Exactly what kinds of parent involvement and what behaviors on the part of parents benefit minority language student learning is another area for further study.

These provocative findings of the study were found within the programs through classroom observations and were not the result of the longitudinal study. The major criticisms of the study are of the comparison design and longitudinal statistical analysis of the standardized tests.

Many of the criticisms mentioned go beyond this particular study, to most program comparison evaluation studies in bilingual education and belie the need for change in the current paradigm of program evaluation. Communities have differing populations, differing school personnel and differing access to research and training. It is, therefore, understandable that differing programs would evolve to meet student needs. If it is required that districts have a variety of programs within the district to participate in evaluation studies, it will seriously limit the evaluation that can take place as well as hamper districts in pursuing programs that seem to best fit their community needs. In addition, teachers are not

robots, they make choices, regardless of program designs, which create variation in the student's educational program. Any attempt to randomly assign teachers in varying programs would be disregarding the integrity of a teacher to teach in ways they believe best suit their situation. Comparison of nominal programs from one site to another will never adequately capture the factors involved in success or failure of an approach. Samaniego and Eubank (1991, p. 13) noted that:

the effect of a given bilingual education initiative will vary with the environment in which it is implemented. In particular, a treatment which works well in one setting may fail in another, or may require nontrivial modifications if it is to be effective elsewhere.

It seems clear from the criticism of the Ramírez et al. study that the traditional design of comparison of treatment groups based on random assignment and blind evaluation is not possible to attain nor perhaps even desirable in studying bilingual education. The panel reviewing evaluations studies on bilingual education (Meyer and Feinberg, 1992) makes the case clearly in stating the criteria required for an effective evaluation in this experimental model:

the intervention is acute and a priori, is expected to yield an acute outcome (produce a large effect);

the intervention acts rapidly, and the evaluation can be carried out over a short period of time.

the imposition of controls for the trial does not create an environment for the study that is substantially

different from the environment in which the proposed therapy would be used on a routine basis.

It is the panel's judgment that virtually all bilingual education interventions violate at least to some extent, all three conditions. (Meyer and Feinberg, 1992, p. 95).

Concerned parents are not likely to allow their children to be randomly assigned to a treatment group, nor would philosophically grounded educators participate in randomly assigned educational treatments which do not suit their theoretical frameworks or successful practical experiences. Administrators will not be willing to set up programs that do not respond to the needs and goals of their communities. Research must take into account the complexity of the variables and design studies based on theory and sound design that capture the reality of the classroom and take into account the needs of the research audience.

The Ramirez et. al (1991) study has compiled massive amounts of data which despite design problems, may be looked at as a source for adding to the pool of knowledge surrounding bilingual education. In addition, the design and methodological problems might serve as an impetus to rethink the current paradigm in bilingual education research.

This next section will advocate the need for a broadened yet cohesive view of the field of research in bilingual education. Such a view must expand the goal of bilingual education and address the needs of all those involved in the field, including policy makers, administrators, teachers, teacher educators, parents and students.

This broadened view may require a redefined role for the researcher.

#### SECTION FOUR: TOWARD A NEW PERSPECTIVE ON RESEARCH IN BILINGUAL EDUCATION

Educational research in general suffers from what Kaestle (1993) calls plainly an "awful" reputation. He quotes many education officials and researchers as to why this negative image exists. Emerson Elliot suggests, "at the policy level, you have to think about supporting research primarily on the grounds that ultimately it is expected to have some impact on the performance of American education"(Quoted in Kaestle, 1993 p. 23). One of the most common criticisms of educational research is "the lack of connection between their (the researchers) research and teacher's practice" (Kaestle 1993p. 27). Some suggest it is because of the wrong questions being asked, others that the findings are not effectively disseminated. Research in bilingual education suffers from the same disparity between research and practice. In addition, policy makers have been disappointed that bilingual education research has not proven definitively that bilingual education works or that one type of program works better than another. Teachers have been disappointed that specific pedagogical questions have not been settled, such as when is the right time to introduce reading in a second language and what are the most effective strategies for teaching content to a mixed group. Parents want to know what kind of program will benefit their child most in succeeding in U.S. society.

Just as bilingual educators have to meet the needs of a diverse group of students, researchers in bilingual education must consider the expectations of a heterogeneous audience, consisting of administrators, teachers, and parents. Bilingual teachers, confronted with students of varying proficiencies in different languages as well as varied degrees of readiness for the academic tasks of school, have developed some effective strategies to communicate with this diverse group. Perhaps drawing on the strategies of effective bilingual teaching and using the language of the bilingual class can help researchers reframe their role in the field of bilingual education. To reinforce this notion, research on effective bilingual instruction will be woven into our discussion.

One of the effective practices that has been adopted widely in bilingual classrooms is interactive group work or cooperative learning (Kagan, 1986; Cohen, 1984, Johnson & Johnson, 1983; Slavin, 1981). In cooperative or collaborative group work students learn language and content by working together and talking with one another (See Chapter X by Robert Slavin in this volume). The proficient bilingual students in the groups play a key role in translating between students of different language backgrounds. They are the "brokers" for the group. Broadly extending this concept to the audience of bilingual education research, such an approach brings people who speak the language of policy, practice and parenting to the table with researchers who speak and write "researchese." Though policy makers have at times attempted to translate research for practitioners, the researcher, from a greater position of objectivity, seems the more likely candidate in this group

to take on the role of "broker" to facilitate cooperation and collaboration among those involved in the field of bilingual education. Reflecting on education and informing policy and practice is what educational researchers are expected to do. The perceived ineffectiveness of educational research to accomplish this goal may be a result of an inability to communicate in the language of the intended audience. Speaking the language of the various participants in this research audience and translating between participants would facilitate such communication.

Imagine now the researcher in the role of translator/facilitator bringing together this heterogeneous group of policy makers, practitioners, and parents to discuss the research agenda. Drawing again on effective practices from the classroom where learners are involved in the choosing of topics and themes (Garcia, 1991), the researcher would look to the group to generate the questions to be researched. As the practitioners, policy makers and parents negotiated and prioritized the concerns of their community, they also begin to share their perspectives. The effective teacher asks, "What do we know? What do we want to know about this topic/problem?" The researcher would draw upon the literature and discuss implications of research to the problem at hand. A good example of this translation of basic research into practitioner language is offered by Catherine Snow (1992) on questions of second language acquisition. She cites the common questions generated by teachers. Then she pulls from the research on second language acquisition to point out the implications which address those concerns. In this role as "broker" the researcher can also help to formulate the larger

contexts and problems of the field of bilingual education based on theoretical frameworks. A broadened vision or perspective based on research findings, historical patterns, and sound theoretical reasoning would benefit the participants in the community of bilingual education.

The present frame within which bilingual education operates is based on the notion of compensating for the deficiencies of language minority children as was discussed in Section Two. The questions that have hung from this frame have revolved around whether native language instruction works and how much native language instruction is enough to get Limited English Proficient students into English only programs.

Many researchers feel the need to change the questions in the research away from whether bilingual education works, or whether one program works better than another, to one that tries to determine how to improve bilingual programs in responding to the diverse communities they serve (Cziko, 1992, Hakuta, 1986, Lindholm & Fairchild, 1990; Padilla, 1990; Willig, 1985). Cziko suggests moving from what is "probable" in all bilingual programs to what is "possible," suggesting that we look at what can be done under the best of circumstances.

One group that has been left out of the discussion until recently has been parents of English speakers who place their students in bilingual programs to learn the language and culture of the minority group in their community. Their concerns, "What does bilingual education offer my child?" have been largely ignored in the compensatory model of bilingual education that sees its role as



"fixing" limited English proficient students so they fit into the existing English only classrooms. Despite the extensive literature from Canada on the benefits of bilingual programs for children of the dominant culture (Lambert, 1972; Swain & Lapkin, 1991) and the more recent literature on Two Way Immersion programs (Lindholm and Aclan, 1991), little has been written about how bilingual education in the U.S. benefits the majority culture student or the majority cultural community. Taking the concern of majority parents to heart suggests a greater breadth to the goal of bilingual education programs from one of compensation to one of enrichment, making foreign language teaching an important component. Padilla (1990) suggests the goal of a "language competent society" may serve to unify researchers to pursue a more coherent path in bilingual education research.

Research and development in science have historically been connected to a 'mission' that is supported by a majority of the general population and by policy makers. Missions are characterized by a joining together of people, organizations and institutions that mobilize to seek a solution to common problems. (Padilla, 1990 p. 19.)

If the mission of bilingual education became one of creating a language-rich society, by logical extension native languages would be viewed as a natural resource (Ruiz, 1988) and bilingualism would be considered a gift (Hakuta, In press). Foreign language program planners would merge their efforts with bilingual program planners

to capitalize on the linguistic resources of the immigrant communities.

A broader pool of resources would come to bear on both the teaching and researching of language in schooling. The audience of the research would become greater and more diverse, increasing the significance of the role of researcher as "a broker of knowledge" in a diverse community of interests. This re-visioning of bilingual education could have important sociological and political implications for the field.

This section of the chapter will suggest that breaking down the isolation that exists in present research will improve the effectiveness of research, policy and practice. In an attempt to sample the diversity of perspectives, a number of people were interviewed from our perceived research audience across the US. Their voices will speak for the diversity of the field. Names are used only when more extensive comments are given. Some survey participants chose to remain anonymous.

#### The Heterogeneous Audience of the Bilingual Education Researcher

Interviews with a variety of parents, practitioners and policy makers in the bilingual research audience brought Moll's notion of "funds of knowledge" (Moll, 1992) to life: namely that each member of a community brings a wealth of knowledge to the learning environment. Research needs to reflect these diverse voices.

This was not a scientific survey but rather an informal sampling from selected people around the country. The interviews opened with the question "What are the issues that you feel should

be addressed in the field of bilingual education?" As one might imagine, the responses reflected the diversity of the audience. Quan Cao, Director of Bilingual Education in Florida, elaborated on a policy perspective regarding what research issues need to be addressed:

- How do appropriate legislation and levels of funding affect bilingual education e.g. teacher training and system building?
- How does the larger restructuring movement tie into bilingual education?
- What influence will the setting of the national goals and standards have on L.E.P. kids?

In general, teachers have more classroom-oriented concerns. A bilingual 4th grade teacher in California suggests that research address "The appropriate role of decoding in a whole language program for L.E.P. kids." A bilingual kindergarten teacher from Texas is interested in how literacy acquisition and second language research intersect. A Language Specialist in Florida is concerned about how to test L.E.P. students so they are not discriminated against and kept out of special services programs. A bilingual sixth grade teacher from a small rural town asks, "How do we teach science to best develop language? What strategies really work? Which strategies give status to Spanish language?" A language consultant from a large city asks, "What do we do about mixed dominant children (those who mix languages or have neither language fully developed)?" Those involved in teacher professional development ask, "How do we change what really happens in school?"

What influences teachers to change so that teachers reflect on what they are doing and why they are doing it?"

In contrast to both administrators and teachers, parents shared a different set of concerns. One English speaking parent wonders "How do we bring middle class Anglo students and poor Mexican kids together and not develop negative stereotypes?" A Mexican parent asks, "Is my child going to learn enough English?"

In an attempt to understand how research is reaching its intended audience interview question included "What sources do you draw on for your information regarding research on bilingual education?" Policy makers utilized government publications and agencies such as the information put out by the National Clearinghouse for Bilingual Education and the Multifunctional Resource Centers. Teachers answered, "workshops, journals such as *Language Arts, Educational Leadership, Phi Delta Kappan*. Parents read newspapers.

The importance of a good road show should not be overlooked in the dissemination of research and the inclusion of teachers and parents in the research community. When policy makers were asked, "How could dissemination of research be improved," Maria Trejo, Director of Categorical Programs, California State Department of Education, suggested that teachers be approached to rewrite the research findings in a language fellow teachers could understand. Teachers on the other hand felt that administrative support to attend workshops would be beneficial. Teachers also mentioned the need to condense research findings:

I want someone to synthesize the research and tell me how those understandings translate into classroom practice. There should be a journal of effective practices with L.E.P. students which synthesizes the literature around themes or issues. I want something that is a little predigested. If we're going to focus on the classroom, people have to facilitate that [reading of the research] for us." (Susana Dutro, Bilingual Mentor Teacher, California).

Teri Marchese, a sixth grade teacher, suggests research be available on audio tapes so teachers can listen to it. State documents and important findings could be made available in staff lounges. Teachers agreed that bringing researchers out to the schools to talk with teachers was important. Judy Stobbe, bilingual kindergarten teacher, suggests that both a bottom up approach, "piquing teachers interest on issues that are important to them"; and a top down approach, "pushing through the hierarchy and having administrators expect informed teaching" were needed to close the gap between research and practice.

The final question asked of practitioners was in regard to researchers' practice: "What sensitivities should researchers be aware of on coming into the classroom?" One central theme emerged: research should be done in the classroom, not in laboratories. This sentiment was reiterated by Kaestle (1993), who cites the transformation of Ann Brown's research from laboratory to classroom, Brown states, "I'm not telling the teacher what I want done...I watch her implement it, and I watch her change it. Actually, I'm totally dependent on a gifted teacher (Quoted in Kaestle, 1993,

p.16)." Jim Greeno adds that work done in a laboratory rather than a classroom creates an insurmountable "translation problem" (Kaestle, 1993 p.16) between the controlled environment and the real world. Teachers interviewed, sensitive to the discomfort of being scrutinized like a germ under a microscope, have a lot to say to researchers entering the classroom:

- Build a relationship with the teacher and strategize together about the research.
- Don't judge a ten minute observation outside of the greater context, managing a classroom is a complex task.
- Engage teachers in reflective practice by asking questions which not only give information to the researcher but also stimulate the teacher to reflect on why they engage in a particular activity.
- Don't just take from the classroom, give something back to the teacher and the class.

Judy Stobbe suggests, "Researchers need to empower teachers by saying, 'You have taught thirty children per year for ten or twenty years. What has worked? You, as the kindergarten teacher, have something to say that I want to listen to'. The voices of teachers ought to be reflected in the research.

The responses of these informal interviews do not pretend to be scientific nor to reveal any surprises to the research community. They do, however, validate the diversity of the perspectives and the need to include these diverse perspectives in formulating research agendas. They also suggest new directions for the role of the

researcher: the researcher as a listener, a collaborator, and a disseminator of knowledge.

### An Inclusive Approach to Research in Bilingual Education

This chapter has looked broadly at the historical, political and sociological influences on the practice and research of bilingual education. It has also looked in-depth at two distinct approaches by federally funded studies in bilingual education. With knowledge of the diversity of the research audience and a redefined role for the researcher, what then, should research look like? Borrowing from effective bilingual classroom practice to improve the research process, it's time to synthesize and look for applications to the real world (Moran, 1992). What do we now know about bilingual education research? How can what we know help us improve the relationship between research and practice?

By now, the complexity of the issues surrounding bilingual education research should be clear. Researchers are influenced by ever-changing political, social and intellectual forces. Their work is expected to satisfy the diverse needs of a heterogeneous audience consisting of administrators, teachers, and parents. In addition, there is a need to strengthen the theoretical underpinnings of research in the field by drawing on basic research studies. The contrasting approaches of the SBIF study and the Longitudinal Immersion study demonstrate the important role of theory in the validity and generalizability of research findings. The SBIF study illustrated the strengths and limitations of strong apriori theory. The Longitudinal Immersion study demonstrated the impracticality of the application

of the traditional model of experimental research to such a complex dynamic social situation as bilingual education and the value of in-class research. Given the complexity and constraints of the project, what might be an alternative to improve research in bilingual education?

A more inclusive approach to research needs to be attempted which would bring in all the groups of stake holders in the field: practitioners, policy makers parents and students. This community should be involved in creating the research questions. This necessitates studies that are localized in specific cultural contexts and address specific questions of concern to those involved in the learning community. Nationwide studies could be created around theories which integrate findings from the smaller localized studies. The panel reviewing evaluation research in bilingual education supports this notion:

For the evaluation of bilingual education treatments, the panel believes that multiple highly focused studies are likely to be much more informative than a single large study. (Meyer and Fienberg, 1992 p. 96).

Multiple studies built around clear theoretical constructs such as how language is acquired and defined terms such as language proficiency, and amount of language use would allow greater generalizability across contexts. In addition, clear descriptive information depicting the factors which characterize each setting, such as teacher and student discourse patterns, numbers of language minority students, and attitudes of the community towards primary



language, would allow researchers to look at constellations of factors in school settings which might influence the success or failure of a given treatment.

In addition to strong theory, the design of the study is a crucial issue. It is important to consider a design which allows the various members of the research audience to define and participate in the evaluation of the program. The panel to review the evaluation of bilingual education research studies suggests a possible model to be adapted (Meyer & Feinberg, 1992): The "evolutionary operation" study design developed by Box and Draper (In Meyer & Feinberg, 1992) utilizes the results of sub-experiments to inform the next level of research. Tharpe and Gallimore (1979) adapted this approach in studying Hawaiian children in the Kamehameha project. The approach suggests that researchers enter the classroom collecting qualitative data which will inform the theoretical questions. These theoretical questions then suggest a treatment variable which will lend itself to quasi-experimentation. After determining whether the treatment effect is great enough, the researcher returns to a qualitative personal approach to evaluate the data and translate it into possible elements of a program. These elements are then established and tested in an experimental approach to determine if they work in the setting in which they are employed.

A hypothetical description of how this process might work follows: The researcher is invited in because policy makers are concerned that language minority students aren't doing well in English. The teacher notes that language minority students rarely speak in class. On consultation with the parents, the parents contend

that their children understand English very well but are reticent about speaking it. The researcher, after observing the class, notes that a recitation mode is the most common form of student-teacher dialogue and whole-class discussions are the common grouping. In discussions with language minority students the researcher learns that they feel shy about making mistakes with their English in front of the class. The researcher may then suggest an intervention which consists of one or more options drawing from basic research theory: 1) moving from whole group to small group discussions; 2) encouraging majority language students to use the minority language (which would allow minority language students to both be experts and see mistakes being made by their peers;) or 3) Reversing student-teacher roles; 4) putting students in charge of teaching certain aspects of the curriculum to their peers.

Any of these treatments would then be tried in the particular setting and evaluated as to their results in terms of increased participation of minority language students. When one of the treatments or a combination of treatments is found to be effective the researcher might then discuss with students and teachers why that particular treatment seemed to increase participation. This discussion may lead to a new understanding and a variation on the treatment. The new treatment, such as encouraging minority language students to have small group discussions in their native language before participating in whole class discussions in English, is one that could then be tried out in other situations. Again, going back and forth between an experimental approach and a qualitative collection of

data would improve the treatment and increase understanding of why and under what conditions it works.

The researcher shares information with policy makers, parents and practitioners to both inform them of research progress and discuss further research steps.

This approach to research in bilingual education, if it is theory based, operationalized in its definitions and explicit in the descriptions of context, could add to the general pool of knowledge regarding bilingual education. It could also serve as an evaluation tool to assess various theories and aspects of bilingual education within different naturally occurring settings. At the same time, it could serve the purpose of improving instructional practices within the local settings.

If research in bilingual education is going to serve its diverse audience it must follow a dynamic design which allows for the interplay of the political and social forces within the context of the communities served. It must be inclusive in its involvement of the educational community in every step of the research. To do this the role of the researcher must include that of listener and broker at the research table, bringing together the entire educational community and facilitating the creation of innovative approaches to researching the significant issues in bilingual education. Those significant issues should be influenced by a broadened perspective which includes foreign language teaching as a goal of bilingual education; a view of minority languages as a natural resource and bilingualism as a gift to be cherished.

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TABLE 1

Fiscal Year

	79	80	81	82	83	ROW TOT
Agency						
NIE	4	9	28	1	4	46
OBEMLA	2	1	5	0	4	12
OPE	3	5	6	1	8	23
NCES	2	0	1	0	0	3
COL TOT	11	15	40	2	16	84

NIE National Institute of Education

OBEMLA Office of Bilingual Education and Mnority Language Affairs

OPE Office of Planning and Evaluation

NCES National Center for Education Statistics.

These figures represent the number of projects funded in bilingual education research by the federal government as a function of lead agency and fiscal year.

TABLE 2  
FUNDING OF PROJECTS BY PROGRAM AND FISCAL YEAR

	79	80	81	82	83	ROW TOT
NIE	325034	1021225	3608523	225000	268896	544867
OBEMLA	63276	443610	381006	0	903232	1791124
OPE	1288457	1536392	1242058	2273650	3880505	10221062
NCES	289283	0	225000	0	0	514283
COL TOT	1966050	3001227	5456587	2498650	5052633	17975147
NIE	National Institute of Education					
OBEMLA	Office of Bilingual Education and Mnority Language Affairs					
OPE	Office of Planning and Evaluation					
NCES	National Center for Education Statistics.					

These figures represent the total budget for projects funded by the federal government as a function of lead agencies and fiscal year.

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