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Dolores Villarreal del Barco
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FIRST LANGUAGE INSTRUCTION AND
SECOND LANGUAGE ACQUISITION AMONG
SPANISH SPEAKING HIGH SCHOOL STUDENTS:
A CASE STUDY

Presented to
the Faculty of the Graduate School
University of the Pacific

In Partial Fulfillment of
the Requirements for the Degree of
Doctor of Education

by
Dolores del Barco

October 19, 1987

This dissertation, written and submitted by

Maria Dolores Villareal Del Barco

is approved for recommendation to the Committee
on Graduate Studies, University of the Pacific

Dean of the School or Department Chairman:

Lay B. Hawley

Dissertation Committee:

David M. Muel

Chairman

Arthur McFar

Raymond T. Toun

Larry L. Pippin

Bobby R. Hopkins

Dated October 19, 1987

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Abstract

FIRST LANGUAGE INSTRUCTION AND SECOND LANGUAGE ACQUISITION AMONG SPANISH SPEAKING HIGH SCHOOL STUDENTS: A CASE STUDY.

DEL BARCO, DOLORES, Ed.D. University of the Pacific, Stockton,
California. 1987. 166 pp.

This case-study had as its principal focus the applicability of James Cummins' theory of developmental interdependence in language acquisition to secondary age students. This theory postulates that, for younger children, the development and strengthening of the first language can ultimately lead to a more rapid and efficient acquisition of the second.

The study set out to test the hypothesis that secondary age Limited English Proficient (LEP) students who receive Primary Language Arts instruction demonstrate higher levels of English acquisition than do comparable students who do not receive this instruction. The primary language of the students was Spanish.

A quasi-experimental research design was used to compare the effect of different treatments on two relatively equal groups of Hispanic LEP students in a single urban high school over a five year period. Achievement and completion of high school work were examined statistically for students enrolled in English as a Second Language and Español Para Hispanos (Spanish for Spanish-Speakers) classes during the course of the study. Hispanic LEP students in neither treatment group

and all other Hispanic students in attendance at the school during the study made up additional comparison groups.

Results of achievement tests, while not completely conclusive, suggest a qualified affirmative of the hypothesis. Students in the Español Para Hispanos (Spanish for Spanish-Speakers) groups demonstrated a statistically significant higher level of achievement in English Reading and Language Arts than did the other LEP groups in Tenth grade. Achievement in English in Eleventh and Twelfth grades, although substantial, was not as definitive.

There was also corroboration for Cummins' views on "Student Empowerment". Correlations of Participation in Treatment Groups with Completion of Studies showed that a statistically significant percentage of students who received instruction in the development of their primary language (Spanish) graduated from high school. The Tenth grade was found to be the most crucial year for treatment to be effective, both for achievement and for completion of studies.

ACKNOWLEDGEMENTS

It is almost redundant to say that a study cannot be conducted in isolation. Certainly this one was not. To the extent that there was success in this study, much credit must go to the faculty and students of the school involved. The cooperation of district and site administrators, counselors, teachers, students and parents is gratefully acknowledged.

In like manner, the suggestions and guidance of my faculty advisors are noted with gratitude. The dissertation committee members made the task simpler through their recommendations. A special acknowledgement for their advice and help must be given to Dr. David P. Baral and Dr. Bobby Hopkins, whose patience and insight are invaluable, and without whom very little could have been accomplished.

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Chapter I

Although there are from 4,000 to 7,000 languages in use throughout the world today, most are not written and most are not used in formal educational settings. However, even though bilingualism is the rule rather than the exception, bilingual education is the exception rather than the rule throughout the world. For the majority of children in the world, the home language is not the language used in school. The alienating effects of this situation contribute to a tremendously high attrition rate for students forced to study in languages other than their own, unless there are efforts made to provide assistance.

With the recent surge of unrest and the resulting escalation of economic hardship throughout the world, and the consequent new waves of migration, there is little likelihood that any region can remain isolated and monolingual. Certainly in Europe and the United States, the guest workers and immigrants have placed a strain on the educational systems of the countries involved. Additionally, throughout Africa, Latin America, and Asia, there are large numbers of indigenous peoples who do not speak the national language and for whom some accommodation must

be made to enable them to participate in the national ^{IA} life.

Thus, the strains placed on educational systems are quite extensive. But the demands on the individual students are also very great. For example, in this country, ^{IA} there are, each year, more and more students at the secondary school level with a limited proficiency in English who, nevertheless, must struggle to complete requirements.

Given the short time which secondary age students have to acquire the content-areas and proficiencies which they will need for high school graduation, there is general agreement that the acquisition of a second language must be accomplished along with the use of that same language for learning. The most efficient means for doing this, however, are still in question.

What will be taught, and how it will be taught, is the subject of much soul searching. The many opinions generated within a given school district as to the proper course to follow reflect the larger national conflict in coming to grips with a rich and varied --though at times overwhelming-- tapestry of backgrounds and linguistic talents.

Controversy that has been generated can be attributed, in part, to the lack of a clear cut, well known, and widely-accepted theoretical basis for determining the most effective methods to provide legitimate equal educa-

tional opportunities to students from these varied backgrounds. There exists a desperate need to conduct more research that will add to the theoretical basis for determining programs and curricular offerings for Limited I English Proficient students.

Background of the Study

In recent years, discussion on the types of programs, kind of instruction, and the philosophical foundations for first and second language learning have been increasingly influenced by the work of James Cummins and Stephen Krashen. The California State Department of Education, Office of Bilingual Bicultural Education, has incorporated their research and theories in Schooling and Language Minority Students: A Theoretical Framework, (1981). Their work, therefore, has a major impact on California school districts.

Cummins' theories of developmental interdependence in language acquisition are interpreted for practical application in the classroom by Krashen, who also adds his own views of "communicative competence". Their concepts regarding sequence and time frames for language acquisition, as well as the appropriate methodologies, IB are of great importance for planning instructional programs.

Cummins (1979) points out that there is a developmental interdependence in language acquisition. His hypothesis, based on research findings in many countries, states that "development of competence in a second language (L₂) is partially a function of the type of competence already developed in L¹ at the time when intensive exposure to L₂ begins" (p.233).

He postulates a Common Underlying Proficiency which can be the basis for learning both concepts and another language. There are concepts which need only be learned once, and which can then be transferred to another language (1979).

Cummins (1981a) further conceptualizes communicative proficiency on two dimensions which include the surface features used for interpersonal communication, and the proficiencies that are necessary for academic work. He states that there is a continuum of linguistic abilities, beginning with the everyday language used in face to face communication, which relies heavily on gestures, facial expression, intonation, and the context of the situation itself. The range extends to the more abstract language in which the context is "reduced" and does not depend on everyday reality. This language is needed to absorb and communicate concepts.

Cummins' conceptual distinction between interpersonal and academic communication skills, and the time

frames he postulates for acquisition of these skills are of utmost importance for planning and developing instructional programs for LEP students at any level. He estimates that interpersonal communication skills which are context-embedded take approximately two years to achieve, while the context-reduced, academic aspects of proficiency take much longer to develop: five to seven years (1981a).

Achievement of proficiency in context-embedded communication, although apparently exhibiting fluency, does not go beyond surface features of language and is heavily dependent on situational reality. Since it does not touch on the kinds of proficiencies needed for academic work dealing with abstractions, there is great risk of creating academic deficits in the students if English proficiency is judged only by context-embedded communication.

This would correspond only to reaching the Receiving and Acquiescence in Responding levels of Krathwohl's (1964) Classification of Affective Categories, and the Knowledge, and perhaps Comprehension, levels of Bloom's (1956) Taxonomy of Educational Objectives. None of these levels corresponds to a true acquisition of more than a passive learning of a skill. Until the skill is mastered at the higher levels such as Organizing and Characterizing or Analyzing and Synthesizing, it cannot truly be a part of the repertoire of the student.

The academic aspects of language proficiency correspond to the higher levels of both hierarchies, and these aspects are transferable from one language to another. Thus, for younger children, "less" instruction in the second language, while developing and strengthening the first, can ultimately lead to "more" rapid and efficient acquisition of the second (Cummins, 1981b).

Statement of the Problem

Since Cummins has developed his theory primarily on the basis of studies involving younger children, it is important to examine the concept with studies of older children to see if there is concurrence. Indeed, some studies have been done at the secondary age level which support his ideas, but there do not seem to be any studies conducted which specifically examine the effects of continued primary language development on secondary students.

Background of the Problem

Limited English Proficient students at the secondary level have a limited amount of time in which they must accomplish two distinct tasks: they must acquire a second language and attain cognitive growth in academic subject areas which they will need for high school graduation and

for further study. In California, they must also, within the time-frame of two to three years, prepare for, and pass, a proficiency examination given in English, if they wish to receive a high school diploma.

For these students the acquisition of their second language must be accomplished along with the use of that same language for learning. If what Cummins has stated in his theory is applicable to secondary age students, it might be suggested that continued development of the primary language at the secondary level could provide a firmer academic basis for attaining proficiency in the second language. There is little research evidence, however, to validate this idea.

In programmatic matters, as well as research, focus appears to be lacking at the secondary level. There are few bilingual programs at this level, and, even within the few available, there are still fewer primary language development classes. For example, when this study was begun in 1983, in the entire Bay Area, only one high school had such classes.

Perhaps because of the perceived immediacy of the needs of younger children to communicate and learn basic concepts essential to building a foundation for schooling, or because older learners are presumed to have concepts in their own language already, and thus do not seem to "need" further development, there appears to be less

concern among policy makers for providing programs directed towards the secondary school level. Whatever the reason, studies of the effect of continuing formal primary language development instruction while learning a second language at the secondary school level do not seem to have been done.

Purpose of the Study

The intent of this study was to examine the effects of first language development at the secondary school level on second language acquisition. More specifically, it set out to test the hypothesis that secondary age Limited English Proficient (LEP) students who receive Primary Language Arts instruction, demonstrate higher levels of English Language acquisition than do comparable students who do not receive this instruction.

This study was based on James Cummins' theory regarding language acquisition. It examined the applicability of this theory of linguistic interdependence for programs at the secondary school level.

The primary language of the students in the study is Spanish. The Primary Language Arts instruction refers to classes in Spanish for Spanish Speakers (Español Para Hispanos - EPH). A description of the study follows.

Research Questions

The study compared the effect of different treatments on two relatively equal groups of Hispanic LEP students in a single urban high school, for each of five years. The two treatments -- English as a Second Language (ESL) only and ESL plus Spanish for Spanish Speakers (Español Para Hispanos - EPH)-- are both designed to assist Limited English Proficient students acquire English, either directly or indirectly.

The study also considered the effect on Hispanic LEP students who received neither treatment. A comparison group comprising Hispanic LEP students not formally enrolled in an ESL or EPH class was selected. Although these students were not scheduled into classes for LEP students, they did receive some instruction from Spanish speaking teachers at the school. This instruction, however, was principally given in English since the classes were designed for Fluent English Proficient students.

Another comparison group was made up of all other Hispanic students in the school. These students had either been designated as Fluent English Proficient, or did not have an oral language proficiency test on file.

In the study conducted, two major questions regarding instructional treatment for secondary level LEP students were examined statistically. The first question

examined achievement in English Reading and Language Arts and the other dealt with completion of high school work.

The first question considered whether a specific treatment produces greater achievement than other treatments, as shown by standardized tests of English. Sub-questions considered the following for the groups in the study:

1. Over the five-year period of the study, is type of treatment associated with a significant difference in achievement in English?
2. Over the five-year period of the study, is type of treatment associated with a significant difference in gain in English?

The other factor that was examined statistically considered the successful completion of high school studies. For this, the major question examined was: Is one treatment associated with greater success in the completion of high school work? Does participation in one type of program lead to graduation in a proportionally greater number of cases than participation in other types of programs?

Research Design

The research design for the study was quasi-experimental. Non-equivalent control groups were used, although

there was an attempt made to have the experimental and control groups as similar as possible. However, since the study used intact, or already assembled, groups over which the researcher had no control, the design could not truly be experimental.

There was also an element of self-selection in the groups, due to the fact that **Español para Hispanos** classes were considered electives in the school program. It could thus be said that some of the subjects sought exposure to the treatment, while the control group students did not, although, as will be seen, some self-selection also entered into the other groups. Insofar as class lists were available for each of the five years, intact groups were used.

Selection, therefore, did pose a problem to the internal validity of the study, as did history and maturation. But there was an attempt to match as closely as possible the groups in the study, and history and maturation were taken into account by investigating the length of residence and previous schooling of the students.

Mortality was also a problem, because in the district selected for the study there is a very high mobility rate of students into and out of the schools. Therefore, it was necessary to consider that the degree of difference in scores from pre-test to post-test between the groups might be due to mortality, rather than treatment.

Pilot Study

A pilot study conducted among 66 Limited English Proficient (LEP) Spanish-Speaking students in the urban high school of the larger study, suggested that the hypothesis proposed for the present case study might be supported. In the pilot study, the Comprehensive Test of Basic Skills-S (CTBS-S) English scores of 42 Tenth, 17 Eleventh, and 7 Twelfth grade students in English as a Second Language (ESL) classes were compared.

Most of these students had studied at least 6 years in Mexico, had been in this country for at least one year, and all were currently enrolled in at least one bilingual content-area class (Social Studies, Mathematics, or Science) at their high school. In addition, 27 of the 66 students were also concurrently enrolled in a Spanish class for Spanish Speakers (Español para Hispanos) that was multigraded.

Since both pre-test and post-test scores were not available for all of these students, only post-test scores were considered. Both t-tests and analysis of variance (ANOVA) were done and a significant difference in means was found in the Reading scores, although not in the Language Arts portion of the tests. These results of these tests are displayed in the following pages in Tables 1 and 2.

The students enrolled in the Spanish for Spanish Speakers (EPH) class in addition to the bilingual content-area class achieved scores that were significantly greater than students who were in the bilingual content-area classes only. However, since no other factors were considered, causal relationships could only be examined in the full study.

TABLE 1

ACHIEVEMENT IN ENGLISH READING AND LANGUAGE ARTS
OF LEP STUDENTS IN PILOT STUDY

READING				LANGUAGE ARTS		
Treatment	M	SD	t	M	SD	t
ESL + EPH	37.89	2.18		39.79	1.94	
			3.76 **			2.17 *
ESL only	30.67	1.51		35.51	1.34	
** p < .01				* p < .05		

TABLE 2

SUMMARY OF ANALYSIS OF VARIANCE OF ACHIEVEMENT
IN ENGLISH READING AND LANGUAGE ARTS SCORES OF
LEP STUDENTS IN PILOT STUDY

READING

SOURCE	SS	df	MS	F
Between Groups	832	1	832	8.58 *
Within Groups	6,216	64	97	
* $p < .01$				

LANGUAGE ARTS

SOURCE	SS	df	MS	F
Between Groups	247	1	247	2.53
Within Groups	6,216	64	97.77	
$p > 0.05$				

Assumptions

This study assumed that instruments used for data collection measure what they say they do, and that the individual respondents answered truthfully to the questions asked. The treatments were assumed to be what their labels say they are.

It was also assumed that the primary language (L1) development teachers in the study are representative of other primary language teachers elsewhere, and that the students in the study are representative of other Hispanic Limited English Proficient students at the secondary school level.

Definition of Terms

The definitions of terms used in this study were derived from the accepted use in the literature on bilingual education, from guidelines prepared by the California State Department of Education (1982), and from the published works of James Cummins (1979, 1980, 1981a, 1981b, 1981c), and Stephen Krashen (1981a, 1981b).

LIMITED ENGLISH PROFICIENT STUDENTS (LEP):

Students whose first language is other than English and who have not attained fluency in English, as measured by one of the state approved tests.

PRIMARY LANGUAGE (L₁):

The language first acquired; the language spoken in the home.

SECOND LANGUAGE (L₂):

An additional language which is acquired and learned; generally a language which is in majority use in the country.

SECOND LANGUAGE ACQUISITION:

Development of ability in a second language in the way children acquire a first language competence, by using it for communication; the acquirer is usually unaware of the rules acquired.

SECOND LANGUAGE LEARNING:

Knowing about a second language; formal knowledge of the language, including rules and grammar.

IMMERSION PROGRAM:

One in which L₁ and L₂ have equal prestige, although L₂ may not be the predominant language in general use in the country; teachers are bilingual and instruction is in L₂ but L₁ is not lost; there is continued development of L₁ in settings outside of school; L₁ instruction is provided; all students begin at the same level of L₂; this tends to be an enrichment class for middle and upper class students, who are speakers of the predominant language.

SUBMERSION PROGRAM:

One in which L₂ has a high prestige but L₁ does not; L₁ is not in general use in the country; teachers are monolingual in L₂; students enter at all levels of L₂; L₁ speakers are placed with native L₂ speakers; L₁ tends to be lost because there is no continued development in school or other settings.

PRIMARY LANGUAGE DEVELOPMENT CLASS:

One in which all aspects of language arts are taught in the Primary language of the student: e.g., Spanish for Spanish Speakers (**Español para Hispanos - EPH**), which includes composition, reading, speech, literary analysis, etc., at the secondary school level.

SHELTERED ENGLISH CLASS:

One in which content-area is taught in English geared to the student's proficiency level; generally begun with subjects that are less language intensive, such as Math, Art, or Science, which rely on use of manipulatives or demonstrations; ~~later, other subjects such as Social Studies~~ can be added to a program.

Limitations

There were several other factors which, although considered of importance, were not a part of this study due to its focus. It is acknowledged that student motivation, optimal age for learning, and differences in teacher attitude, ability, and skills are important factors influencing language acquisition. However, it was felt that these factors should be the focus of other studies.

Quality of instruction could not be considered. And, although there was a variety of teachers for each treatment, not all of their treatment groups were large enough to provide statistically significant data. Therefore, this factor was not included in the study.

In addition, there were several questions, also considered important, which were not addressed in this study because the data were not available, or for which practical difficulties made it impossible to obtain data. Among these are factors of length of previous schooling in L₁ and its influence on L₂ acquisition, and the possible interaction of length of schooling in L₁ and other treatment factors that might positively influence L₂ acquisition at the secondary school level.

Length of previous exposure to L₂ and its influence on L₂ acquisition, and length of L₁ development instruction at the secondary school level and its influence on L₂ acquisition were also not included because these variables involve consideration of the factors of student mobility, and of discontinuity within programs of study. These could not be readily addressed given the information available.

Delimitations

This study dealt only with Tenth, Eleventh, and Twelfth grade Hispanic students, in one urban high school, over a five year period. It was based on a comparison of standardized test scores in English, using CTBS-S and CTBS-U tests, and available records of attendance and completion of studies.

Summary

The study had as its focus the applicability of James Cummins' theory of bilingual proficiency to secondary age students. It specifically set out to test the hypothesis that secondary age Limited English Proficient (LEP) students who receive Primary Language Arts instruction demonstrate higher levels of English acquisition than do comparable students who do not receive this instruction.

The quasi-experimental research design compared the effect of different treatments on two relatively equal groups of Hispanic LEP students in a single urban high school over a period of five years. Achievement on standardized tests in English Reading and Language Arts and completion of high school work were examined statistically for students enrolled in ESL and EPH classes during the study. Additional comparison groups were made up of Hispanic LEP students not in either treatment group and all other Hispanic students in attendance at the school during the years of the study. The results of the statistical comparisons are given in Chapter 4.

CHAPTER 2

With the intention of examining the applicability of Cummins' theory for students at the secondary age level, it is the purpose of this chapter to review research on second language acquisition. Since there are many factors which influence the acquisition of a second language, it was decided to focus the review on several broad categories of research findings. These include linguistic factors, length of residence, social factors, literacy, the critical age factor, and student empowerment as a factor in school success. This latter category also includes a review of the dropout problem for Hispanics and other groups.

Pertinent research findings in each area were considered. That there is an interdependence among these factors can be seen by the cross-referencing that the researchers do, and by the difficulty of categorizing some of the studies by the most important factor that was considered. Some studies could fit into several categories, and the choice of category was, in some cases, arbitrary on the part of the reviewer.

Linguistic Factors

There are many studies that investigate the phenomena of second language acquisition and learning in young children, ranging from Lambert and Tucker's 1972 study in Canada to doctoral dissertations in the United States and other countries. However, there are few which have concentrated on students of junior and senior high school age. *ID*

The interdependence of the development of first language skills and second language acquisition has been extensively studied, and Cummins has considered most of these studies in building his theory. Skutnabb-Kangas and Toukomaa (1976) conducted a study on Finnish children in Sweden which formed part of the basis for Cummins' theory. This study found that children with a greater amount of previous schooling in the primary language did better in learning a second language than those with little or no training, when placed in a second language submersion class. These authors used age as a proxy for schooling in the primary language.

Rosier and Farella (1976), in their study of Navajo children in Rock Point, Arizona corroborate these finding, as does Leyba (1978) in his Santa Fe, New Mexico study. These, and other studies in various countries, such as those of Modiano (1973) in Mexico, Collison (1974) in

Ghana, Appel's 1970 study of Turkish and Moroccan migrants in Holland, and the Gonzalez-Moreyra and Aliaga (1972) study of Quechua children in Peru, all suggest that students acquire a second language and develop concepts better if they first receive a sound basis in their primary language.

The students in all of these studies received instruction through their primary language before being transferred to instruction through a second language. It is of particular interest that these students were speakers of languages which are not considered of equal prestige with the national language by the speakers of the majority language in their countries.

In the Ukrainian and German bilingual programs in Edmonton, Alberta, cited by Cummins and Mulcahy (1978), it was shown that bilingual skills can positively influence the cognitive functioning of minority children. Segalowitz (1977) also supports the transfer of learning from first to second language that Cummins includes in his theory.

Length of Residence

A factor that is closely tied to previous schooling is that of length of residence in a new country, along with the type of instruction received. Skutnabb-Kangas

and Toukomaa (1976) agree that length of schooling in the primary language is important, as is the attitude the migrant children have toward their own language and culture. Finnish children, who arrived in Sweden after the age of ten and who had had schooling in their own language in Finland, did better than those who were born in Sweden.

This reiterates what teachers of Spanish speaking immigrants in the United States have asserted for years. Baral's 1979 study shows results which tend to confirm this, although he contends that length of residence, without adequate schooling, can show a negative correlation with the acquisition of the second language. Baral argues that

Limited instruction in the home language of the child during the early primary years, followed by an abrupt shift to instruction in a second language, may not eliminate educational retardation. The full benefits of the native language approach may only be attained after prolonged instruction in the home language throughout the primary years (Baral, 1979, p. 12).

Age on arrival, previous schooling, and length of residence all appear to be significant in the acquisition of a second language. Cummins (1980) cites the various kinds of bilingual programs in Canada, such as the ones studied by Ramsey and Wright (1972), in which length of residence was an important factor.

However, he also suggests that the effects of length of residence tend to diminish after 5 years (Cummins, 1981c). A study of Japanese and Vietnamese students in

Canada tends to corroborate this. Cummins et al. (1983) found that length of residence was important, but age was a determinant too. Older immigrant students made more rapid progress in acquiring English, and also maintained and developed their own primary language more than students who migrated at younger ages.

Social Factors

For immigrants, there are many forces acting upon their views of themselves and the surrounding society, and these impinge on their ultimate way of either "assimilating" and losing cultural identity or "acculturating" to the new ways without losing identity. Consideration has to be given to the frustrations confronting immigrants which affect their acquisition of the new language and the relative ease or difficulty with which this will occur. Guthrie (1975) sums up these frustrations when he comments that

Learning to live in an alien society is much more than learning to speak a strange language, to eat unfamiliar food, and to observe different social customs. It involves a subtle but important change in one's expectations of oneself and of others and in the control one feels over his emotions. . . one has to cope with a loss of identity and familiarity and to get along without some of the social events that provide encouragement, direction and meaning in our lives (Guthrie, 1975, p.95).

For language minority children, there is also the emotional conflict engendered in their parents by the

differing expectations of what the school can do, or should do. This will affect their own perceptions of themselves in relation to school and the new society. Lightfoot (1978) discusses the discontinuity that can occur between home culture and school culture and offers suggestions on ways to diminish this. Her comments can apply as well to language minority children as to the other minorities she writes about.

Wolcott (1974) describes the antagonism that can result on the part of both "natives" and newcomers which "rises rather expectedly out of feelings that one's own cherished ways are being eroded and lost or that one's ethnic group belongs to a have-not class" (p.412). Additionally, the fact that special attention is given to the educational needs of recent immigrants, may cause third or fourth generation Americans to feel as "have-nots" because their grandparents learned English and forgot their own language. Even though these persons "made it", there were no "special" programs for them.

Among factors discussed by those in the field, there is agreement that the relative status of the minority language has important implications for the acquisition of a second language. Fishman (1976) considers the relative success or failure of bilingual programs in terms of the status of the languages involved in the instruction. He discusses the results of many studies in various parts

of the world. Bowen (1977) also looks at this factor in terms of language acquisition.

Paulston (1978) examines the phenomena of language shift and reviews the causal factors identified by Schermerhorn, which include the origin of the contact situation, the degree of enclosure, and the degree of control by dominant groups. Migrant groups are often more willing to change languages than groups which are indigenous or of long residence in an area and who consider their status to be that of "colonized" or "annexed" groups. In the United States, this can include Mexican-Americans and American Indians, who may have many degrees of language proficiency in either or both languages, but who are unwilling to entirely "give up" their "first language".

Ogbu and Matute-Bianchi (1986) expand on this and believe, moreover, that school failure cannot be conceptualized only in terms of discontinuities between "cultural and language backgrounds of the children. . . and the demand of the school milieu" (p.74). They consider it necessary to distinguish between types of minorities who are successful and those who are not, and to examine "each type of minority in relation to societal and historical forces and schooling" (p.75).

Teacher expectancy and socioeconomic factors are also discussed by Baral (1979), affective factors such as self-confidence and self-esteem by Krashen (1981a), and low

anxiety and motivation of the learner by Dulay and Burt (1978). For school situations, these factors can play an important role in the ease and rapidity with which a second language is acquired.

Literacy

In discussions of factors important to second language acquisition, literacy is included, although not generally apart from the issue of previous schooling. Krashen (1981a) is of the opinion that older children and adults use the first language as a "strategy" in acquiring a second language, and also take advantage of a better developed cognition and a conscious use of grammar. Literacy is crucial to these strategies.

The suggestion that bilingual students respond to literacy instruction in the same way that they respond to the school in general, is given by Goodman, Goodman, and Flores (1979), who argue for relevance in the curriculum, and for the acceptance of the students' language and culture on the part of the school. Akinnase (1981) echoes this in his discussion of literacy, which he sees as a powerful instrument for cultural change because it is a "gatekeeper".

Skutnabb-Kangas (1979) agrees with the gatekeeper role and discusses the phenomenon of "semilingualism"

which can result because of deliberate policies in industrial Western countries. She argues that semilingualism results when children, whose own language has a low prestige, are forced to receive instruction in a language other than their own, and become literate in neither. And, since it fits the policies of some countries to have large numbers of workers who are not highly trained, the gatekeeper role played by literacy toward the obtaining of highly skilled jobs is reinforced.

Another researcher, Daniele (1980), found a correlation between Spanish literacy and achievement in English as a Second Language and Mathematics. In his study of junior high age children, Melendez (1980) found that students taught reading in Spanish as part of their secondary level studies demonstrated a significant advantage in acquiring English.

Critical Age Factors

The question of a critical period for language learning has many discussants, both pro and con. One of the most cited is Lenneburg (1967), whose major premise is that although the brain begins with bilateral representation of language function, it becomes lateralized by puberty. This would end the optimal period for the learning of language.

However, de Villiers and de Villiers (1979) do not agree, pointing to such studies as that of Entus (1975) at McGill University, in which it was found that babies a few days old already showed lateralization in dichotic listening tests. Lateralization would not, thus, be a decisive factor.

In reviewing studies of cerebral dominance and language acquisition, Krashen (1981b) also considers the critical period hypothesis in relation to lateralization. He suggests that puberty appears to be an important turning point, although cerebral dominance may not be complete at puberty and lateralization comes earlier. He concludes that "evidence for a biological barrier to successful adult acquisition is lacking" (p.81), which is an important concept to keep in mind for those working with adult or adolescent learners.

Langacker (1968) seems to be in agreement that the onset of adolescence marks a dividing line in the ability to learn a new language. Fishman (1976) also suggests that language study be done no later than the beginning of secondary school.

Segalowitz (1977) does not agree with the age factor. He considers that there is little evidence to support biological factors as being important in the determination of language learning success or for there being a critical developmental period for language learning.

The concept that age is an important factor in second language acquisition, or indeed in acquiring any other skill, is based in part on the idea that practice, and the time in which to develop it, are crucial to the wide application of a cognitive skill. Cole (1975) has pointed this out.

Among those who have worked with older learners, Bailey, Madden, and Krashen (1978) point out that older children also have better memory systems and more referents to meaning than do younger children. There is concurrence for this among other psycholinguists such as Snow and Hoefnagel-Hohle (1978) and Ramirez and Politzer (1978).

Ervin-Tripp (1978) suggests that, since older children already have knowledge available, there is acceleration in learning a second language. She also states that second language acquisition in "natural situations" is similar to that of the first. She, thus, reinforces the "interdependence" theory of Cummins and the transfer of learning which he outlines in his discussion of Cognitive Academic Language Proficiency.

Student Empowerment

Although the issue of student empowerment could well be included among social factors as an influence in lan-

guage acquisition, it is, however, so complex a topic that it was considered separately. Debate of the issue posits explanations as well as solutions for one of the most powerful barriers to successful second language acquisition among children: school failure and school dropout.

From the issue of second language acquisition for minority students to that of school failure is not a wide leap, even though it might seem a non-sequitur. This is because, as Ogbu and Matute-Bianchi (1986) suggest, in a school situation, there are several categories of minority students (caste, immigrant, and autonomous) involved. However, only one (caste) seems with more consistency to fail academically.

Ogbu and Matute-Bianchi contend that immigrant groups, for the most part, have chosen to come to the host country. And, although they may experience political, social, and economic exploitation by the dominant group, they tend not to internalize the stratification system. They always have the option to return to the homeland or to do what they can to overcome obstacles. Immigrant groups develop an "alternation" model, by means of which they are enabled to selectively participate in two different cultures or languages by altering behavior.

But, as Ogbu and Matute-Bianchi point out, caste-like minorities have become "incorporated to a society

. . . involuntarily and permanently through slavery, conquest or colonization and then relegated to menial status" (1986, p.90). The exploitation by the dominant group may be the same as toward other minorities, but the interpretation and response by the "caste" minority is different.

These authors believe that "caste-like" minorities (among whom they include some Mexican-Americans, and, by extension, other Mexican immigrants who assume the characteristics through their identification with the group) tend to develop a folk theory of success or social mobility (p.93). They then tend to adopt "survival strategies" that do not necessarily equate with academic success. Ogbu and Matute-Bianchi argue that

unlike the immigrants, caste-like minorities do not appear to make a clear distinction between those behaviors that result in academic success and school credentials for employment and other material benefits and those behaviors that result in the replacement of the minority culture with Anglo culture and identity to linear acculturation. (1986, p.98)

This can have serious educational implications because differences in the cultural dissonance and discontinuity will affect how school is perceived by each group.

Something of this is indirectly alluded to in the studies on language acquisition success as related to age on arrival and previous schooling, as well as the prestige and status issues in language learning cited previously. Cummins (1986) comments that

widespread school failure does not occur in minority groups that are positively oriented towards both their own and the dominant culture, that do not perceive themselves as inferior to the dominant group, and that are not alienated from their own cultural values (p.22).

He argues that it is of importance to redefine "institutional goals so that the schools transform society by empowering minority students rather than...disabling them" (p.34).

In this context, it is important to recognize that there are efforts to do exactly what Cummins is advocating. Fajardo (1976) has outlined the educational reform begun in Peru during the period of 1973-1976. The curricular conceptualization that was developed incorporated local realities and language and promoted active community involvement. Fajardo explains that

Promoción comunal. . . con ésta se hace participar a los adolescentes y adultos en el diseño y desarrollo de proyectos que ayuden al desarrollo económico y social de la localidad y del país en general (1976, p.31).

Community development. . . with this (aspect of curriculum) adolescents and adults are made to participate in the design and implementation of projects which will help the economic and social development of the locality and the country in general. (Translation: del Barco)

As can be seen, there is a validation given to both the culture and language of the home and also to the concepts expressed by Freire (1970), in his Pedagogy of the Oppressed. It is in Freire's "problem-posing education" in which "no one teaches another, nor is anyone

self-taught" (p.67) that the "process of humanization" can become the "action and reflection of men upon their world in order to transform it" (p.66).

One of the most important concepts Freire expresses, that of "concientizaçao", is, in the Peruvian curriculum, attempted as a policy. Historical events -- the rise of a military junta, the sudden death of President Velasco who promoted the curricular reform, and the turmoil wrought by large scale terrorism -- have put the Peruvian curriculum reform in stasis. However, it could serve as a model for the incorporation of "dominated" groups, such as were described earlier, without the "disabling" that Cummins warns about.

It is of very special importance that what is done in the schools reflect what is of importance to the "clients". In the United States the student drop-out rate continues to climb, especially among minority students. By 1985, when the National Coalition of Advocates for Students published results from hearings of its Board of Inquiry, it could be shown that

one in four students enrolled in the ninth grade drops out. The dropout rate for black students is just under twice that for white students; the rate for Hispanic students is just over twice that for whites. Forty-five percent of Mexican-American and Puerto-Rican students who enter high school never finish, compared to 17 percent of Anglo students (Lefkowitz, 1985, p.3).

The high dropout rate is attributed by Lefkowitz to

a type of discrimination that acts to "push-out" students. He contends that schools do this for minority students by

paying lip-service to bilingual education and then offering flawed, ineffective, or damaging programs. Rarely. . . offer programs that enable Hispanic students to gain a full command of English while helping them to retain or acquire literacy in Spanish (1985,p.4).

It was Rosalie Wax (1970) who first proposed the term "push-outs" in commenting that for Sioux boys, as well as for urban working class - Negroes, Puerto Ricans, or whites - the situation is similar. Because the school is a "gatekeeper" in terms of jobs to be obtained later, students who do poorly are "handicapped". But also, those who do well are "permanently crippled" because they are prevented from "becoming 'real men'" within the context of their own cultural situation.

Thus, schools do not seem to respond to students, and they drop out. But more telling, perhaps, are the comments Lefkowitz records from students themselves as to why they stay in school. When asked to what they attribute their academic success, "again and again. . . they answer, 'I met someone who cared about me'" (1985, p.8).

Magyar(1986), in her analysis of an intervention program for dropouts posits that the "at-risk" student is one who

has difficulty with several factors relating to academic performance, attendance, after-school employment, family economic status, age versus grade attained and transiency (p.iv).

The lack of school success described above, in a sense, reinforces Ogbu and Matute-Bianchi's contention that for some minorities there is no perception of reward in continuing their education because even young children "will begin to form their image of the connection or lack of connection between school success and future employment or self-advancement" (1986,p.128).

Summary

This review included studies that consider five variables in researching the phenomenon of second language acquisition. These included linguistic factors, effects of length of residence (as a proxy for previous schooling in the primary language), social factors, literacy and critical age factors. Each of these factors was examined for its influence on the acquisition of a second language.

Additionally considered were the concept of student empowerment and the differing ways in which minority groups react to "dominant" groups and schooling. Understanding of these are of considerable importance in the designing of school curricula which will enable minorities to succeed in the larger society without losing their own vitality and identity.

Because there does not now seem to exist, except in rare instances, this type of design, the dropout rate

appears to reflect the extent to which the dominant society values minority cultures and languages within school contexts. The essence of most of the studies presented here is that the schooling provided must be responsive to the recipients' own attitudes, culture, and coping strategies.

The present investigation was primarily concerned with linguistic factors and instructional variables. However, since the other studies have a bearing on the hypothesis tested, they were included here as background information, and as a basis for the analysis of the data.

CHAPTER 3

The site selected for the study is an inner-city high school situated in an area of single and multiple family dwellings, with a high number (50.7%) of Aid For Dependent Children (AFDC) recipients, and other low-income families. It is located in a high-crime area and there is a great mobility rate among the students in this school, as in the entire district.

The number of Limited English Proficient students has shown a steady increase from about 154 in the mid 1970's to over 700 in 1986. Although Spanish speakers still constituted the majority (506 out of 712) of the LEP students in the 1986-87 school year, there were growing numbers of Cambodian, Vietnamese, Cantonese, Laotian, Mien, and Tagalog speakers, as well as a sprinkling of others who speak 15 different languages.

The school now offers a complete program for LEP students, although it did so only partially during the period of the study. LEP students are tested and placed in English as a Second Language classes as well as in all courses required for graduation, offered either as bilingual or "Sheltered English" classes according to the students' English proficiency level.

Español Para Hispanos (EPH) classes are still offered, and there are more sections available than during the period of the study. During the years covered by the study only a limited number of ESL, EPH, and bilingual classes were offered, and there was no set procedure for enrolling the students into these classes.

Enrollment figures for the school vary during the year, and from year to year, but average out at about 1600 students per year during the period of the study. The attrition rate for all students at the site was about 21% in 1985-86, which was the first year that such records were kept.

This compares favorably with a 31% attrition rate reported among Chicano-Latino students statewide by the California State Department of Education in 1982 (Ochoa, 1984). These figures, nevertheless, are a cause for concern, and, during the 1986-87 school year, were the focus of a district task force study and project.

The data collection phase of the study itself took place over a period of three years, although it covered a five year span for students in the school. All available records were used to determine group participation, achievement, and attendance. In addition, interviews with site personnel, students, and parents added to the information gathered, which was then analyzed either statistically or in a descriptive summary.

Sample

All Hispanic students in attendance at the target high school between the school years 1980-81 and 1984-85 were included in the study. All available records of Tenth, Eleventh, and Twelfth grade Limited English Proficient (LEP) Spanish speaking students at that school for each of the five years were used. During this five year period, district records show 729 students with the designation "Hispanic" (coded as #13 in the Office of Research and Evaluation files).

Composition of Sample

Insofar as class lists were obtainable, the groups used were intact, or already assembled, groups over which the researcher had no control. Due to various circumstances, it was not possible to obtain complete lists of either LEP students or of all students in ESL classes for every year.

Lists which were available were checked through the District Research Department's computerized records for the yearly Comprehensive Test of Basic Skills (CTBS) score of each student. The Spring CTBS scores are available for all students for each year they are in the school system. However, for students absent from school during

a testing period, or who were unable to take a test, no scores are available since make-up tests are not generally given.

The intact groups must be considered to have a certain amount of self-selection, since, during the early years of the study, students enrolled in classes during a "Milling" period at the beginning of the school year. The "Milling" provided an opportunity for students, teachers and counselors to meet and mutually decide on the enrollment of students in courses for the current academic year. Required courses were assigned by the counselor but electives were usually selected by mutual consent of the student, teacher, and counselor, although in many cases the counselor alone placed the student in a class.

During the later years of the study, "Milling" was no longer done and classes were selected or suggested by the counselor for the student. Counselors, in interviews, pointed out that EPH as an elective had always been suggested only if there was time in the student's schedule, or if there was a request from the student, parent, or teacher. Similarly, ESL was suggested, in some cases, for Fluent English Proficient (FEP) students because there was a conflict in scheduling, and not because the student "needed" the assistance. The result was that there were several Fluent English Proficient students in ESL.

Selection Procedure

In the initial stages of the study, District student identification numbers were checked to develop lists of all students coded 13 (Hispanic) in attendance at the school from 1979 to 1985. A computer printout of all these students was obtained from the District Research and Evaluation office. This printout contained the standardized test scores for the three year period each graduating class was at the school. Three year scores were thus available for students in the graduating classes of 1983, 1984, and 1985. Students in the graduating classes of 1981, 1982, 1986, and 1987, however, only had a printout listing for the actual years in attendance during the 1979-1985 period.

Using these printouts as the basis for determining attendance each year, students were placed into various groups, according to class rosters. Students were, however, only counted in one treatment group each year, although each student might have participated in several groups throughout the time-span of the study.

Target school storage rooms were searched for teachers' grade books from 1979-1983. Class rosters for 1983-84 and 1984-85 were available in the school registrar's office. These grade books and class rosters were

reviewed to determine EPH/ESL classes and other groups for each year of the study.

Each student's year-by-year scores were coded on the printout as to class taken. An alphabetical list was then developed for each year, by class taken and/or grouping category into which each student could be placed.

Treatment Groups

The treatment groups were designated EPH, ESL, and Neither, for students whose oral English scores indicated they were of Limited English Proficiency, as determined by a score of 5 or less on the Bilingual Syntax Measure-II. This is one of the California state approved tests for determining oral English proficiency, and it is also the District adopted test.

Included in the group All Others were all other Hispanic students whose oral English scores indicated they were Fluent English Proficient (6N or 6S on the Bilingual Syntax Measure-II), and students for whom no oral English scores were available. The latter might or might not have been LEP students, but were included in this grouping because there was no way to test them.

Until litigation was initiated by parents in 1985, and a Superior Court-approved Consent Decree was signed, there did not exist within the school district a truly

systematic effort to test all students whose Home Language Survey indicated a home language other than English. Indeed, not all students were even given a Home Language Survey to complete. There were, as a result, 35 students in the study for whom there was no record of a Bilingual Syntax Measure-II (BSM-II) score. These 35 students were included in the All-Others group.

There were, additionally, 76 LEP students whose Bilingual Syntax Measure-II scores were reported as "E" on the district printout. In 1983, a large number of student scores were arbitrarily changed to "E" (Exit) in the district computer records, because they had "been in the program three years".

Although this procedure was not sanctioned at the time by either California state regulations or by district policy, the designation persisted because of various factors. Among these were a confusion of records, record systems, and directives resulting from an abrupt reorganization of the district Office of Bilingual Education in 1983. This reorganization (dismantlement) was the district administration answer to an acrimonious year-long struggle by parents and community members to design and implement a Bilingual Master Plan for the school system.

The original BSM-II scores, having been eliminated from the computer records, were effectively lost, since

there was, at the time the research was done, no other system or procedure to "back-up" record keeping, and the Office of Bilingual Education had ceased to exist. Although the original test documents were, presumably, also recorded and stored at the school sites, it proved impossible to retrieve these.

Since they had not yet met reclassification criteria at the time their records were lost, for the purposes of the study, these 76 students were still considered LEP. These "E" students were placed in the Neither treatment group, except for 12 cases in which students were in either the EPH or ESL groupings for a specific year.

Although the school district adopted Reclassification criteria as part of the Bilingual Master Plan, it should be noted that, of the 729 students in the study, there were only 13 who were officially reclassified in 1984-85 as Fluent English Proficient. Eleven of these were Tenth graders in 1984-85. The other two had met the criteria to be reclassified by the Spring of 1985. Since there were so few, and otherwise fit into the All Others category, they were not considered separately. They were all included in the All Others group.

It must also be pointed out that 40 of the 179 students in the All Others category were included in an ESL or EPH group during at least one year. There were 17 in ESL and 23 in EPH, over the five year period.

Although these 17 students, in most cases, were Fluent English Proficient (BSM-II score 6N or 6S), they were, nevertheless, scheduled for ESL. This was due to the programming policy followed by the counselors at the time. And, since EPH was considered an elective, the 23 FEP students taking this were considered eligible for that course. In terms of final results, these numbers tend to balance each other out, since four of the above-mentioned ESL students also took EPH during another year. Spread over the total of five years, this is only a small percentage of all students in the study, and thus was not considered separately. The sample composition is shown in Table 3. This shows the composition of each group year by year.

Table 3

SUMMARY OF SAMPLE COMPOSITION

Group	1980-81	1981-82	1982-83	1983-84	1984-85
EPH	27	36	33	26	30
ESL	22	24	24	23	16
Neither	111	114	112	77	76
All Others	24	22	40	62	74
TOTALS	184	196	209	188	196

Instrumentation

Data on achievement were gathered from the District records of scores on the Comprehensive Test of Basic Skills-Form U (CTBS-U), Level J. Only the Reading and Language Arts subtest results were included in the study. This test has been normed nationally and is used by the target district as a means of measuring achievement of students. Prior to the 1983 testing, the CTBS-Form S was used. For the comparisons in the study, however, the CTBS-S scores were converted to CTBS-U scores.

The Bilingual Syntax Measure-II, developed by Hernandez-Chavez, Burt, and Dulay, is published by the Psychological Corporation, Harcourt, Brace, Jovanovich. It is an oral test for students in grades 3-12, and is designed to assess the student's structural proficiency in English. A series of cartoons and questions elicit student responses, which are evaluated for placement on one of six levels. This test has been accepted by the State of California for both the initial assessment and reclassification of LEP students. It has been in official use in the target district since the 1978/79 school year.

Several questionnaires were used to gather data that were not analyzed statistically. The student questionnaire regarding previous schooling was completed by a random selection of five students in the study. This was

done in the 1984-85 school year. The six questions request specific information regarding previous schools attended, classes taken, reasons for taking EPH, and years of bilingual study. The questionnaire is included in Appendix A.

Three of the four teachers who taught the Spanish language development classes were interviewed in 1984-85. The other EPH teacher, who taught during the first year covered by the study, was no longer at the school. A questionnaire was given to these teachers to elicit data about organization of course content, methods used, texts and materials used, and selection of students for the class. This instrument, included in Appendix B, was also used in the classroom observations of the two teachers who were currently teaching EPH.

The three school counselors, who had been at the school during the five year study, were interviewed to elicit the criteria used in the programming of LEP students into EPH and bilingual content-area classes. This questionnaire, which was also used for the interview with the principal, is in Appendix C.

Five randomly selected parents of students in the study were also interviewed concerning their attitudes toward the use and study of the primary language, and their knowledge of, and participation in, the program. This questionnaire is included in Appendix D.

Data Collection

Sources

Data for the study were obtained from several sources. District standardized test results were used to examine academic achievement in English and as a check on attendance/graduation. Individual student transcripts were also reviewed. Interviews and questionnaires were used for more subjective information related to attitudes, policy, and actual practices.

Test Scores

Since the test-result reporting procedure for the district makes use of number correct (raw) scores for each section of the Comprehensive Test of Basic Skills-Form U (CTBS-U), these scores were converted to scale scores for the study. The charts for conversion were given in the CTBS-U and V, Norms Book, Grades 7-12, from McGraw Hill, 1982.

The district used the CTBS-Form S, Level J, for grades 10-12 until the 1982 Spring testing. The district began the use of the CTBS-Form U, Level J, that Spring. Therefore, all students in attendance through the 1981-82

school year had scores which were initially CTBS-Form S, Level J .

These scores, after initially being converted to scale scores, were then converted to CTBS-Form U, Level J, scores. The charts provided by the McGraw Hill Company were used for this procedure. On these charts, the Total Reading and Total Language scale scores are presented in columns so "S" and "U" scores can be matched.

For this study, where there was more than one matching entry, the Form-U score nearest the middle of the entries was used. Where there was no matching entry, the numerically closest entry was used. If two "U" scores were given as equivalents, the higher was used in all cases. This followed directions given by the McGraw Hill Company.

Some scores on the CTBS-S were too low to show an equivalent on the CTBS-U, so these scores were not considered. They were counted as "no test taken".

The above described procedures were followed for all students in the study except for those who were tenth graders in the 1983-84 and 1984-85 school years. Their test scores were based only on the CTBS-Form U, Level J. It was also necessary to include the scores from the 1979-80 school year because these were the pre-tests for students in attendance in 1980-81, the first year of the study.

Test Data Entering Procedure

All available scores, as Form-U, Level J scores, were then transferred onto a form, which was developed by the researcher, so that an identification number could be assigned to each student for the coding of the Reading and Language Arts scores and other data included in the study. The use of this form, included in Appendix E, also facilitated the entry of data systematically into the computer for statistical analysis.

Each student was given an identification number beginning with the number one (1) for the Reading data and with two (2) for the Language Arts data. Other data were also coded for each student. These included the student's sex, the grouping sequence for the three years in attendance, the group in which the student was each year, the individual pre/post scores for each year, and the Bilingual Syntax Measure-II (oral English proficiency) score. The teacher sequence was also included for the students who had been in EPH classes.

All of the data were entered twice into the computer and the printout was checked against the original lists before statistical calculations were run. Since the data were entered twice, the computer also checked for inconsistencies in the data entries.

Other Data

For data that were not to be analyzed statistically, the research followed a different procedure. Interviews were conducted, classroom observations were done, and school records were reviewed for this phase of the study.

Interviews, using questionnaires, were conducted with three counselors, the principal, three EPH teachers, and five randomly selected students during the 1985 Spring semester. Classroom observations and interviews with five parents were also conducted then and in the Fall of 1985.

Individual student transcripts were reviewed to determine if students in ESL and EPH were also concurrently enrolled in other bilingual classes. Transcripts also gave an indication of eventual graduation or non-completion of high school work.

However, because the district did not initiate a procedure to identify drop-outs until after the study took place, and since most students who dropped out during the years of the study did not do so formally, the indicators used in this study for graduation or non-completion of high school work were the presence or absence of Spring tests in the Twelfth grade. For drop-outs at the Tenth or Eleventh grades, the indicators were a pre-test, but no post-test thereafter.

Only 19 students were thus shown for the Tenth grade and 111 for the Eleventh grade. Of the Twelfth graders (all years) in the study there were 140 who seem to have started but did not finish their final year. A total of 270, thus, were considered to have dropped out during the years of the study. This amounts to 37% of the 729 Hispanic students in the study. These figures were used for the statistical analysis.

Analysis of Data

Data that were obtained through interviews, observation, and review of records, were summarized in a descriptive narrative. Data that could be quantified were submitted to statistical analysis.

Statistical Analysis

The statistical analyses of the data were conducted using the SPSS-X2 programs CROSSTABS, ONE-WAY, ANOVA, and ANCOVA. The computer is a Digital Equipment Corporation-VAX/VMS Version V4.2, and the records use FORTRAN (FIN) carriage control.

A frequencies printout was used to check possible configurations for comparison or statistical analysis. If there were not enough data in a given configuration for

a comparison to be statistically significant, it was not done.

For example, even though there were four EPH teachers during the five years of the study, there were not enough students of each to form a sequence pattern. One of the teachers had more students than the others, since he taught EPH every year, and the other teachers only taught a section for a maximum of two years during the study. However, since a comparison of achievement results of each class would be of most use only to the teachers involved, and does not influence the larger study, it was decided not to include these as part of the statistical analysis for the study. This information, though, will be shared with the teachers if they request it.

Research Questions

The two research questions considered achievement in English and successful completion of studies. These research questions are listed below, with the null hypotheses and specific statistical tests employed in the analyses.

Question 1.

Over the five year period of the study, is type of treatment associated with a significant difference in achievement in English?

- A. Over the five years of the study, there is no significant difference among Tenth graders in English Reading scores between treatment groups.
 - 1. Measures: Score by Group 10 on CTBS-U Reading for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.

- B. Over the five-year period, there is no significant difference in gain among Tenth graders in English Reading scores between treatment groups.
 - 1. Measures: Gain by Group 10 on CTBS-U Reading for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.

- C. Over the five years of the study, there is no significant difference among Tenth graders in English Language Arts scores between treatment groups.
 - 1. Measures: Score by Group 10 on CTBS-U Language Arts for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.

- D. Over the five-year period, there is no significant difference in gain among Tenth graders in English Language Arts scores between treatment groups.
 - 1. Measures: Gain by Group 10 on CTBS-U Language Arts for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/ Multiple Classification Analysis.

- E. Over the five years of the study, there is no significant difference among Eleventh graders in English Reading scores between treatment groups.
1. Measures: Score by Group 11 on CTBS-U Reading for each treatment group.
 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.
- F. Over the five-year period, there is no significant difference in gain among Eleventh graders in English Reading scores between treatment groups.
1. Measures: Gain by Group 11 on CTBS-U Reading for each treatment group.
 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.
- G. Over the five years of the study, there is no significant difference among Eleventh graders in English Language Arts scores between treatment groups.
1. Measures: Score by Group 11 on CTBS-U Language Arts for each treatment group.
 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.
- H. Over the five-year period, there is no significant difference in gain among Eleventh graders in English Language Arts scores between treatment groups.
1. Measures: Gain by Group 11 on CTBS-U Language Arts for each treatment group.
 2. Analysis: Analysis of Variance/Analysis of Co-Variance/ Multiple Classification Analysis.

- I. Over the five years of the study, there is no significant difference among Twelfth graders in English Reading scores between treatment groups.
 - 1. Measures: Score by Group 12 on CTBS-U Reading for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.

- J. Over the five-year period, there is no significant difference in gain among Twelfth graders in English Reading scores between treatment groups.
 - 1. Measures: Gain by Group 12 on CTBS-U Reading for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.

- K. Over the five years of the study, there is no significant difference among Twelfth graders in English Language Arts scores between treatment groups.
 - 1. Measures: Score by Group 12 on CTBS-U Language Arts for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/Multiple Classification Analysis.

- L. Over the five-year period, there is no significant difference in gain among Twelfth graders in English Language Arts scores between treatment groups.
 - 1. Measures: Gain by Group 12 on CTBS-U Language Arts for each treatment group.
 - 2. Analysis: Analysis of Variance/Analysis of Co-Variance/ Multiple Classification Analysis.

Question 2.

Is there one treatment associated with greater success in the completion of high school work?

- A. Over the five year period, there is no significant difference in indicators of completion of studies between treatment groups.
 - 1. Measures: Indicator of completion of studies is a post-test score in the 12th grade for any student whose class reached 12th grade during the period of the study.
 - 2. Analysis: Cross-tabulation/Chi-Square.
- B. Over the five year period, there is no significant difference in indicators of completion of studies between treatment groups, associated with sequence of treatment.
 - 1. Measures: Indicator of completion of studies is a post-test score in the 12th grade for any student whose class reached 12th grade during the period of the study.
 - 2. Analysis: Cross-tabulation/Chi-Square.
- C. Over the five year period, there is no significant difference in indicators of completion between treatment groups with more than one year of treatment.
 - 1. Measures: Indicator of completion of studies is a post-test score in the 12th grade for any student whose class reached 12th grade during the period of the study.
 - 2. Analysis: Cross-tabulation/Chi-Square.

Narrative Description

Interviews are summarized, as is the review of site records. Notes on classroom observations are also briefly summarized. They are included in order to give a background for the study, although it is acknowledged that it is not possible to give other than a partial picture of the setting.

Summary

In this chapter, the site of the study, sample, selection procedures, instrumentation, and procedures of the study were detailed. The process used for data gathering and the methods of analysis were explained. Research questions and research hypotheses were outlined, as were the statistical analyses which used SPSS-X2 programs. Results of the statistical analyses are given in Chapter 4, as are the narrative descriptions.

Chapter 4

This study was undertaken with the purpose of testing the applicability of James Cummins' theory of bilingual proficiency to secondary school level LEP students. It specifically set out to test the hypothesis that secondary age Limited English Proficient (LEP) students who receive primary language arts instruction, demonstrate higher levels of English language acquisition than do comparable students who do not receive this instruction.

Research questions were formulated to test the hypothesis. In turn, research hypotheses were developed concerning patterns of interrelationships that could be expected if the original questions or ideas were correct.

These research hypotheses, expressed in Null form (i.e. that no difference exists between populations being compared), comprise the basis for the statistical procedures carried out. The results are expressed in terms of the probability of the data under the assumption that the Null hypothesis is true.

The questions and hypotheses were analyzed and the results are given below. In addition, the results of the

interviews with parents, students, teachers, counselors and principal are briefly summarized as background.

Question 1

"Over the five year period of the study, is type of treatment associated with a significant difference in achievement in English?" Each of the Null hypotheses generated by this question was examined through an analysis of variance, an analysis of co-variance and a multiple classification analysis.

Null hypothesis A

"Over the five years of the study, there is no significant difference among Tenth graders in English Reading scores between treatment groups."

For those students with both pre- and post-test Reading scores during the tenth grade year, the analysis of covariance demonstrated a significant difference in adjusted means, as shown in Table 4 A. The Multiple Classification Analysis of the Score by Group 10 with covariate showed that the group All Others did best and the EPH group was next. The ESL and Neither groups still demonstrated lower group means even when results, shown in Table 4 B, were adjusted for independents plus cova-

riates. The Null hypothesis was rejected because the possibility that the difference was due to randomness was less than 0.001.

Table 4

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	32128	3	10709	11.679 *
Residual	342048	373	917	
Total	628343	377	1666	
* $p < 0.001$				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10

Group 10	N	Adjusted Means	BETA
1. Español Para Hispanos	47	728.49	
2. English as a Second Language	38	710.33	
3. Neither	205	725.94	
4. All Others	88	743.56	
			0.23

Table 5

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	8496	2	4248	4.069 *
Residual	298584	286	1044	
Total	483203	289	1671	
* p < 0.05				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10 - LEP ONLY

Group 10	N	Adjusted Means	BETA
1. Español Para Hispanos	47	726.09	
2. English as a Second Language	38	708.02	
3. Neither	205	723.53	
			0.13

As can be seen by Table 5, among the LEP-only students, the EPH group in grade 10 had a significantly higher group mean than did either of the ESL or Neither groups. The ESL group still had a decidedly lower mean

even when the adjustment was made for independents plus covariates in the Multiple Classification Analysis.

Null Hypothesis B

"Over the five-year period, there is no significant difference in gain among Tenth graders in English Reading scores between treatment groups."

The Analysis of Variance showed that there was no statistically significant difference in gain in English Reading scores between treatment groups. The Null was accepted because the possibility that the difference was due to randomness was greater than 0.05, since $p > 0.25$.

The Multiple Classification Analysis showed, however, that the All Others and the EPH groups demonstrated greater gain than did either of the ESL and Neither groups, both of which evidenced a more marginal gain even after the adjustment was made for independents. These results are shown below in Table 6.

The Analysis of Variance of the LEP-only groups likewise showed that there was no statistically significant difference in gain in English Reading scores between treatment groups, although the EPH group showed somewhat greater gain. These results of this test are shown below in Table 7.

Table 6

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	5498	3	1832	1.245
Residual	529956	360	1472	
Total	535454	363	1475	
$p > 0.25$				

Table 7

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	1629	2	814	0.512
Residual	442200	278	1590	
Total	443829	280	1585	
$p > 0.50$				

Null Hypothesis C

"Over the five years of the study, there is no significant difference among Tenth graders in English Language Arts scores between treatment groups."

For those students with both pre- and post-test Language Arts scores during the tenth grade year, the analysis of covariance showed that there was a significant difference in adjusted means in English Language Arts scores between treatment groups. Table 8 A shows the results.

The Multiple Classification Analysis of the Score by Group 10 with covariate showed that the group All Others did best and the EPH group was next. The ESL and Neither groups still demonstrated lower means even when the results, shown in Table 8 B, were adjusted for independents + covariates. The Null hypothesis, therefore, was rejected.

The Null hypothesis was also rejected for the comparison of the LEP-only groups. As can be seen by Table 9, among the LEP-only students, those in the EPH group in grade 10 had significantly higher scores than did those students in the ESL or Neither groups. The possibility that the difference was due to randomness was less than 0.025. Even when the adjustment was made for independents + covariates in the Multiple Classification Analysis, the

EPH group was shown to have done significantly better than the ESL and Neither groups.

Table 8

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	15718	3	5239	6.108 *
Residual	314807	367	857	
Total	602907	371	1625	
* $p < 0.001$				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH LANGUAGE ARTS
SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10

Group 10	N	Adjusted Means	BETA
1. Español Para Hispanos	47	699.51	
2. English as a Second Language	40	681.30	
3. Neither	201	691.05	
4. All Others	84	703.31	
			0.17

Table 9

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	6546	2	3273	3.748 *
Residual	248010	284	873	
Total	454176	287	1582	
* p < 0.05				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH LANGUAGE ARTS
SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10 - LEP ONLY

Group 10	N	Adjusted Means	BETA
1. Español Para Hispanos	47	696.42	
2. English as a Second Language	40	678.81	
3. Neither	201	687.82	
			0.12

Null Hypothesis D.

"Over the five-year period, there is no significant

difference in gain among Tenth graders in English Language Arts scores between treatment groups.

The Analysis of Variance showed that there was no statistically significant difference in gain in English Language Arts scores between treatment groups at the Tenth grade level. The Null hypothesis was accepted because the possibility that the difference was due to randomness was greater than 0.05, since $p > 0.25$. The results of this test of significance are shown below in Table 10.

Although the results were not statistically significant, the Multiple Classification Analysis showed that the EPH group demonstrated greater gain than did the ESL, Neither, and All Others groups, even after the adjustment was made for independents.

Table 10

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	5071	3	1690	1.352
Residual	450094	360	1250	
Total	455165	363	1253	
$p > 0.25$				

The Analysis of Variance of the LEP-only groups (as shown in Table 11) similarly demonstrated no significant difference in gain in English Language Arts scores between treatment groups at the Tenth grade level. Therefore, the Null hypothesis was also accepted for this comparison, since the possibility that the difference was due to randomness was greater than 0.05.

The Multiple Classification Analysis showed that the EPH group appeared to have a somewhat greater gain than did the ESL and Neither groups. However, the difference was not statistically significant.

Table 11

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 10)	5019	2	2509	2.058
Residual	338983	278	1219	
Total	344002	280	1228	
p > 0.13				

Null Hypothesis E.

"Over the five years of the study, there is no significant difference among Eleventh graders in English Reading scores between treatment groups."

For those students with both pre- and post-test Reading scores during their eleventh grade year, the analysis of covariance demonstrated a significant difference in adjusted means, as shown in Table 12 A. The Null hypothesis was rejected because the possibility that the difference was due to randomness was less than 0.001.

The Multiple Classification Analysis of the Score by Group 11 with covariate showed that the group All Others did best and the EPH and Neither groups were next with nearly equal means. The ESL group, however, still demonstrated a markedly lower mean even when results, shown in Table 12 B, were adjusted for independents plus covariates.

The Null hypothesis was also rejected for the comparison of the LEP-only groups. As can be seen by Table 13, among the LEP-only students, those in the Neither and EPH groups had significantly higher scores than did the students in the ESL group. The possibility that the difference was due to randomness was less than 0.001. Even when the adjustment was made for independents plus covariates in the Multiple Classification Analysis, the

ESL group still markedly lower means than did the other two groups, whose means were almost equal.

Table 12

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	14817	3	4939	6.634 *
Residual	246444	331	744	
Total	626658	335	1870	
* $p < 0.001$				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11

Group 11	N	Adjusted Means	BETA
1. Español Para Hispanos	62	737.38	
2. English as a Second Language	40	716.94	
3. Neither	164	737.31	
4. All Others	70	740.92	
			0.16

Table 13

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	14852	2	7426	10.121 *
Residual	192240	262	733	
Total	445174	265	1679	
* $p < 0.001$				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11 - LEP ONLY

Group 10	N	Adjusted Means	BETA
1. Español Para Hispanos	62	733.20	
2. English as a Second Language	40	711.52	
3. Neither	164	733.36	
			0.19

Null Hypothesis F.

"Over the five-year period, there is no significant difference in gain among Eleventh graders in English Reading scores between treatment groups."

The analysis of variance (Table 14) showed that there was no statistically significant difference in gain in English reading scores between treatment groups among Eleventh graders. The Null hypothesis was accepted because the possibility that the difference was due to randomness was not significant at 0.05, since $p > 0.286$.

The Multiple Classification Analysis showed that the EPH demonstrated somewhat greater gain than did the Neither, All Others, and ESL groups, after the adjustment was made for independents.

Table 14

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	3222	3	1074	1.268
Residual	262674	310	847	
Total	265807	313	849	
* $p < 0.286$				

The Analysis of Variance of the LEP-only groups (as shown in Table 15) also demonstrated no significant difference in gain in English Reading scores between treatment groups. The Null hypothesis was accepted for this

comparison, since the possibility that the difference was due to randomness was greater than 0.05.

The Multiple Classification Analysis showed that the EPH group appeared to have a somewhat greater gain than did the Neither or ESL groups, although the difference was not statistically significant.

Table 15

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	3191	2	1595	1.765
Residual	222379	246	903	
Total	225570	248	909	
p > 0.173				

Null Hypothesis G.

"Over the five years of the study, there is no significant difference among Eleventh graders in English Language Arts scores between treatment groups."

For those students with both pre- and post-test Language Arts scores in the eleventh grade year, the analysis of covariance showed no significant difference in English Language Arts adjusted means between treatment groups.

The Null hypothesis was accepted because the probability that the difference was due to randomness was greater than 0.05. The results are shown in Table 16 A.

Table 16

**A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS
SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11**

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	1007	3	335	0.445
Residual	240179	318	755	
Total	612939	322	1903	
p > 0.721				

**B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH LANGUAGE ARTS
SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11**

Group 11	N	Adjusted Means	BETA
1. Español Para Hispanos	60	701.91	
2. English as a Second Language	40	696.95	
3. Neither	157	701.23	
4. All Others	66	703.84	
			0.04

The Multiple Classification Analysis of the Score by Group 11 with covariate showed that the group All Others did best and that the EPH group was next. The Neither and ESL groups still demonstrated lower means even when results, shown above in Table 16 B, were adjusted for independents plus covariates.

Table 17

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS

SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 10 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	1011	2	505	0.625
Residual	204809	253	809	
Total	478891	256	1870	
p > 0.536				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH LANGUAGE ARTS

SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11 - LEP ONLY

Group 11	N	Adjusted Means	BETA
1. Español Para Hispanos	60	697.50	
2. English as a Second Language	40	691.36	
3. Neither	157	697.08	0.05

The Null hypothesis was also accepted for the comparison of the LEP-only groups. As can be seen above in Table 17, none of the groups had significantly higher means than the others, since the significance was 0.536. When the adjustment was made for independents plus covariates in the Multiple Classification Analysis, the EPH group seemed to have done somewhat better than the Neither and ESL groups.

Null Hypothesis H.

"Over the five-year period, there is no significant difference in gain among Eleventh graders in English Language Arts scores between treatment groups."

The results of the analysis of variance, shown below in Table 18, demonstrated that there was no statistically significant difference in gain in English Language Arts scores between treatment groups at the Eleventh grade level. The Null hypothesis was accepted because the possibility that the difference was due to randomness was greater than 0.300.

The Multiple Classification Analysis showed that the ESL and EPH groups demonstrated somewhat greater gain than did the Neither or All Others groups. The difference in gain, however, was not enough to be statistically significant.

Table 18

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS
GAIN BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	3131	3	1043	1.227
Residual	263658	310	850	
Total	266790	313	852	
$p > 0.300$				

The analysis of variance of the LEP-only groups (as shown in Table 19) likewise demonstrated no significant difference in gain in English Language Arts scores between treatment groups at the Eleventh grade level. The Null hypothesis was also accepted for this comparison, since the possibility that the difference was due to randomness was greater than 0.05.

The Multiple Classification Analysis for the LEP-only groups showed that the ESL and EPH groups appeared to have somewhat greater gains than did the Neither group. The difference was not statistically significant at the 0.05 level.

Table 19

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 11 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 11)	1955	2	977	1.046
Residual	229896	246	934	
Total	231852	248	934	
$p > 0.353$				

Null Hypothesis I.

"Over the five years of the study, there is no significant difference among Twelfth graders in English Reading scores between treatment groups."

For those students with both pre- and post-test Reading scores during their twelfth grade year, the analysis of covariance did not show a significant difference in adjusted means between treatment groups. Although the difference approached significance with a possibility less than 0.062 that the difference was due to randomness, the Null was accepted because the significance was greater than 0.05. The results are shown in Table 20.

Table 20

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	5515	3	1838	2.481
Residual	174839	236	740	
Total	468013	240	1950	
p > 0.062				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12

Group 12	N	Adjusted Means	BETA
1. Español Para Hispanos	43	743.30	
2. English as a Second Language	31	744.65	
3. Neither	121	738.86	
4. All Others	46	751.56	
			0.11

The Multiple Classification Analysis of the Reading scores for the Twelfth grade showed that the All Others

group did best and the ESL and EPH groups were next, although distant. The Neither group mean was much lower even when the adjustment was made for independents plus covariates.

Table 21

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	910	2	455	0.549
Residual	158420	191	829	
Total	345193	194	1779	
p > 0.58				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH READING SCORES
OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12 - LEP ONLY

Group 12	N	Adjusted Means	BETA
1. Español Para Hispanos	43	740.39	
2. English as a Second Language	31	741.28	
3. Neither	121	736.20	
			0.05

As can be seen above in Table 21, when the adjustment was made for independents plus covariates in the Multiple Classification Analysis, the ESL and EPH groups showed somewhat higher values than did the Neither group. The Null was also accepted for the comparison of the LEP-only groups because the difference was not significant at the 0.05 level.

Null Hypothesis J.

"Over the five-year period, there is no significant difference in gain among Twelfth graders in English Reading scores between treatment groups."

The analysis of variance showed that there was no statistically significant difference in gain in English Reading scores between treatment groups in the Twelfth grade. The Null hypothesis was accepted because the possibility that the difference was due to randomness was greater than 0.05. These results are shown below in Table 22.

The Multiple Classification Analysis, however, showed that the ESL group seemed to demonstrate greater gain than did the All Others and EPH, although all were greater than the Neither group even after the adjustment was made for independents.

Table 22

**SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12**

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	5112	3	1704	2.022
Residual	190483	226	842	
Total	195595	229	854	
$p > 0.112$				

The analysis of variance of the LEP-only groups (as shown below in Table 23) also demonstrated no significant difference in gain in English Reading scores between treatment groups at the Twelfth grade level. The Null hypothesis was also accepted for this comparison, since the possibility that the difference was due to randomness was greater than 0.05.

The Multiple Classification Analysis showed that, at the Twelfth grade level, the ESL group appeared to have a somewhat greater gain than did the EPH and Neither groups. The difference, however, was not statistically significant.

Table 23

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH READING GAIN
BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	4193	2	2096	2.236
Residual	173435	185	937	
Total	177628	187	949	
p > 0.11				

Null Hypothesis K.

"Over the five years of the study, there is no significant difference among Twelfth graders in English Language Arts scores between treatment groups."

For those students with both pre- and post-test Language Arts scores during their twelfth grade year, the analysis of covariance showed that there was a significant difference in English Language Arts adjusted means between treatment groups. The Null hypothesis, therefore, was rejected. The results are shown below in Table 24.

The Multiple Classification Analysis of the Score by Group 12 with covariate showed that the group All Others did best and the EPH group was next. The ESL group and

the Neither group followed at a distance, even when the adjustment was made for independents plus covariates.

Table 24

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS
SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	9346	3	3115	4.732 *
Residual	151442	230	658	
Total	422005	234	1803	
* p < 0.003				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH LANGUAGE ARTS
SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12

Group 12	N	Adjusted Means	BETA
1. Español Para Hispanos	44	714.64	
2. English as a Second Language	32	710.11	
3. Neither	117	703.99	
4. All Others	42	720.12	
			0.15

Table 25

A. SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS
 SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	3619	2	1809	2.602
Residual	131440	189	695	
Total	312295	192	1626	
p > 0.07				

B. MULTIPLE CLASSIFICATION ANALYSIS OF ENGLISH LANGUAGE ARTS
 SCORES OF PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12 - LEP ONLY

Group 12	N	Adjusted Means	BETA
1. Español Para Hispanos	44	711.05	
2. English as a Second Language	32	705.88	
3. Neither	117	700.57	
			0.11

The Null hypothesis, however, was accepted for the comparison of the LEP-only groups. As can be seen above in Table 25, the differences in English Language Arts scores among the LEP-only groups approach significance, but are not statistically significant at the 0.05 level,

since the possibility that the difference was due to chance was 0.07. When the adjustment was made for independents plus covariates in the Multiple Classification Analysis, the EPH group seemed to demonstrate a higher achievement than did the ESL and the Neither groups.

Null Hypothesis L.

"Over the five-year period, there is no significant difference in gain among Twelfth graders in English Language Arts scores between treatment groups."

The analysis of variance demonstrated that there was a statistically significant difference in gain in English Language Arts scores between treatment groups at the Twelfth grade level. The Null hypothesis was rejected because the possibility that the difference was due to randomness was less than 0.05. These results are shown in Table 26.

The Multiple Classification Analysis, showed that the ESL group demonstrated greater gain than did the other groups. The EPH group was next and the All Others group followed. The Neither group had the least gain even after the adjustment was made for independents.

The analysis of variance of the LEP-only groups (as shown in Table 27) also demonstrated a significant difference in gain in English Language Arts scores between

treatment groups. Since the possibility that the difference was due to randomness was less than 0.05, the Null hypothesis was rejected.

Table 26

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS
GAIN BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	8798	3	2932	3.752 *
Residual	176672	226	781	
Total	185470	229	809	
* $p < 0.012$				

Table 27

SUMMARY OF ANALYSIS OF VARIANCE OF ENGLISH LANGUAGE ARTS
GAIN BY PARTICIPANTS IN TREATMENT GROUPS IN GRADE 12 - LEP ONLY

Source	SS	DF	Mean Square	F
Main Effects (Group 12)	8181	2	4090	4.892 *
Residual	154711	185	836	
Total	162892	187	871	
* $p < 0.009$				

The Multiple Classification Analysis showed that the ESL group demonstrated greater gain than did the EPH and Neither groups. The EPH group was only slightly less and the Neither group had a minimal gain.

Question 2.

"Is there one treatment associated with greater success in the completion of high school work?"

Each of the Null hypotheses generated by this question was examined through a cross-tabulation of the joint frequency distribution of cases according to the classificatory variables posited by the Null. The Chi-Square test of statistical significance was used to determine whether or not a systematic relationship existed between the variables.

Null Hypothesis A.

"Over the five-year period, there is no significant difference in indicators of completion of studies between treatment groups."

The cross-tabulation of Graduate Status by Participation in Treatment Group in Grade 10 seemed to indicate that a greater proportion of students in the EPH group in the tenth grade year graduated than did students who were

in the ESL, Neither, or All Others groups in the tenth grade. The Chi-Square test, which showed a value of 15.4, demonstrated that the statistical probability that a relationship such as this would occur by chance was less than 0.01. Therefore, the Null hypothesis was rejected for this comparison. The results of this test of significance are shown below in Table 28.

Table 28

**CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH
PARTICIPATION IN TREATMENT GROUP IN GRADE 10**

GRADUATE STATUS	EPH	ESL	NEITHER	ALL OTHERS	Row Total
GRADUATE	Count 42	25	83	35	185
	Row % 22.7	13.5	44.9	18.9	31.4
	Col.% 48.3	26.9	31.1	24.6	
NON GRAD.	Count 45	68	184	107	404
	Row % 11.1	16.8	45.5	26.5	68.6
	Col.% 51.7	73.1	68.9	75.4	
Column Total	87 14.8	93 15.8	267 45.3	142 24.1	589 100.0
<u>Chi Square</u> <u>D.F.</u> <u>Significance</u> <u>Min E.F.</u> <u>Cells with E.F. < 5</u>					
15.4 3 < 0.01 * 27.3 None					

The cross-tabulation of Graduate Status by Participation in Treatment Group in Grade 11 also seemed to indicate that a greater proportion of students in the EPH group in the eleventh grade year graduated than did students who were in the ESL, Neither, or All Others groups in the eleventh grade. The Chi-Square test, with a value

of 26.8, demonstrated that the statistical probability that a relationship such as this would occur by chance was less than 0.001. The Null hypothesis, therefore, was rejected for this comparison. The results are shown in Table 29.

Table 29

CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH
PARTICIPATION IN TREATMENT GROUP IN GRADE 11

GRADUATE STATUS	EPH	ESL	NEITHER	ALL OTHERS	Row Total
Count	61	28	111	36	236
GRADUATE Row %	25.8	11.9	47.0	15.3	42.4
Col.%	65.6	40.6	39.4	31.9	
Count	32	41	171	77	321
NON GRAD. Row %	10.0	12.8	53.3	24.0	57.6
Col.%	34.4	59.4	60.6	68.1	
Column Total	93	69	282	113	557
	16.7	12.4	50.6	20.3	100.0
Chi Square	D.F.	Significance	Min E.F.	Cells with E.F. < 5	
26.8	3	< 0.0001 *	29.2	None	

The cross-tabulation of Graduate Status by Participation in Treatment Group in Grade 12 indicated that there was a relationship between some help and graduation status. A greater proportion of students in the ESL and EPH groups in the twelfth grade year graduated than did students in the All Others or Neither groups in grade 12. This would seem to indicate that if the students were present in the twelfth grade and were receiving help,

either ESL or EPH, a greater proportion graduated. The Chi-Square test, which generated a value of 22.3, demonstrated that the statistical probability that a relationship such as this would occur by chance was less than 0.0001. Therefore, the Null hypothesis was rejected for this comparison. The results of this test are shown in Table 30.

Table 30

CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH
PARTICIPATION IN TREATMENT GROUP IN GRADE 12

GRADUATE STATUS		EPH	ESL	NEITHER	ALL OTHERS	Row Total
GRADUATE	Count	46	38	137	57	278
	Row %	16.5	13.7	49.3	20.5	66.2
	Col.%	85.2	86.4	59.1	63.3	
NON GRAD.	Count	8	6	95	33	142
	Row %	5.6	4.2	66.9	23.2	33.8
	Col.%	14.8	13.6	40.9	36.7	
Column Total		54	44	232	90	420
		12.9	10.5	55.2	21.4	100.0
Chi Square	D.F.	Significance		Min E.F.	Cells with E.F. < 5	
22.3	3	< 0.0001 *		14.9	None	

Further corroboration of the findings made through the previously shown comparisons were given by an examination of the results of the cross-tabulation of the Graduate Status by Participation in the EPH or Non-EPH Treat-

ment Groups in each of the grades. The Chi-Square test was also done for each comparison.

The results (shown below in Table 31) of the cross-tabulation of the Graduate Status Correlated with Participation in the EPH or Non-EPH Treatment Groups in Tenth grade demonstrated that there was a statistically significant association between participation in an EPH group in the tenth grade and graduation status. Of those who graduated, a greater proportion of those in EPH graduated than did those in the Non-EPH group. The value of Chi-Square was 13.5, and the probability that the relationship was due to randomness was less than 0.001. Therefore the Null was rejected.

Table 31

CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH PARTICIPATION IN EPH OR NON-EPH TREATMENT GROUP IN GRADE 10

GRADUATE STATUS		EPH Grade 10	NON-EPH Grade 10	Row Total
GRADUATE	Count	42	143	185
	Row %	22.7	77.3	31.4
	Col.%	48.3	28.5	
NON GRADUATE	Count	45	359	404
	Row %	11.1	88.9	68.6
	Col.%	51.7	71.5	
Column Total		87 14.8	502 85.2	589 100.0
<u>Chi Square</u>		<u>D.F.</u>	<u>Significance</u>	
13.6		1	< 0.001 *	

The results of the cross-tabulation of the Graduate Status Correlated with Participation in the EPH or Non-EPH Treatment Groups in the Eleventh grade demonstrated that there was a statistically significant association between participation in an EPH group in the Eleventh grade and graduation status. Of those who graduated, a greater proportion of those in EPH graduated than did those in the Non-EPH group. The Null was rejected because the probability that the relationship was due to randomness was less than 0.001. The value of Chi-Square was 24.7. The results are shown in Table 32.

Table 32

**CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH
PARTICIPATION IN EPH OR NON-EPH TREATMENT GROUP IN GRADE 11**

GRADUATE STATUS		EPH Grade 11	NON-EPH Grade 11	Row Total
GRADUATE	Count	61	175	236
	Row %	25.8	74.2	42.4
	Col.%	65.6	37.7	
NON GRADUATE	Count	32	289	321
	Row %	10.0	90.0	57.6
	Col.%	34.4	62.3	
Column Total		93 16.7	464 83.3	557 100.0
<u>Chi Square</u>		<u>D.F.</u>	<u>Significance</u>	
24.7		1	< 0.0001 *	

The results of the cross-tabulation of the Graduate Status by Participation in the EPH or Non-EPH Treatment Group in the Twelfth grade also demonstrated that there was a statistically significant association between participation in an EPH group in the Twelfth grade and graduation status. Of those who graduated, a greater proportion (more than 20%) of those in EPH graduated than did those in the Non-EPH group. The Null hypothesis was rejected because the probability that the relationship was due to randomness was less than 0.01. The value of Chi-Square was 9.99. The results are shown in Table 33.

Table 33

**CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH
PARTICIPATION IN EPH OR NON-EPH TREATMENT GROUP IN GRADE 12**

GRADUATE STATUS		EPH Grade 12	NON-EPH Grade 12	Row Total
GRADUATE	Count	46	232	278
	Row %	16.5	83.5	66.2
	Col.%	85.2	63.4	
NON GRADUATE	Count	8	134	142
	Row %	5.6	94.4	33.8
	Col.%	14.8	36.6	
Column Total		54 12.9	366 87.1	420 100.0
<u>Chi Square</u>		<u>D.F.</u>	<u>Significance</u>	
9.99		1	< 0.0016 *	

Null Hypothesis B.

"Over the five-year period, there is no significant difference in indicators of completion of studies between treatment groups, associated with sequence of treatment."

The cross-tabulation of the Graduate Status by Sequence of Treatment (EPH/ESL and EPH/NEITHER) in Grades 10-11 demonstrated that there were no statistically significant relationships among the sequences examined. The EPH/EPH sequence approached significance ($p < 0.08$) but was not significant at the 0.05 level. The Null was accepted. Other sequences with EPH seemed to show somewhat greater association with graduation than did the ones with ESL alone. The results are shown in Table 34.

Table 34

CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH
SEQUENCE OF TREATMENT IN GRADES 10-11

GRADUATE STATUS		EPH Both Years	ESL Both Years	EPH - ESL	ESL - EPH	Row Total
GRADUATE	Count	20	7	5	5	37
	Row %	54.1	18.9	13.5	13.5	49.3
	Col.%	66.7	33.3	35.7	50.0	
NON GRAD.	Count	10	14	9	5	38
	Row %	26.3	36.8	23.7	13.2	50.7
	Col.%	33.3	66.7	64.3	50.0	
Column Total		30 40.0	21 28.0	14 18.7	10 13.3	75 100.0
Chi Square		D.F.	Significance	Min E.F.	Cells with E.F. < 5	
6.8		3	$p > 0.07$	4.933	1 of 8 (12.5%)	

The cross-tabulation of the Graduate Status by Sequence of Treatment, EPH/Neither and ESL/Neither, in grades 10 and 11 also demonstrated that there were no statistically significant relationships among the sequences examined, although the sequences with EPH seemed to have somewhat greater association with graduation than did the sequences with ESL. The statistical significance was $p > 0.30$ and, therefore, the Null hypothesis was also accepted for these configurations. The results are shown below in Table 35.

Table 35

CROSS-TABULATION OF GRADUATE STATUS CORRELATED
WITH SEQUENCE OF TREATMENT IN GRADES 10-11

GRADUATE STATUS	EPH - NEITHER	NEITHER - EPH	ESL - NEITHER	NEITHER - ESL	Row Total
GRADUATE	Count 11 Row % 27.5 Col.% 57.9	Count 10 Row % 25.0 Col.% 45.5	Count 13 Row % 32.5 Col.% 34.2	Count 6 Row % 15.0 Col.% 33.3	Count 40 Row % 41.2
NON GRAD.	Count 8 Row % 14.0 Col.% 42.1	Count 12 Row % 21.1 Col.% 54.5	Count 25 Row % 43.9 Col.% 65.8	Count 12 Row % 21.1 Col.% 66.7	Count 57 Row % 58.8
Column Total	Count 19 19.6	Count 22 22.7	Count 38 39.2	Count 18 18.6	Count 97 100.0
<u>Chi Square</u> <u>D.F.</u> <u>Significance</u> <u>Min E.F.</u> <u>Cells with E.F. < 5</u>					
3.58 3 $p > 0.30$ 7.423 None					

Null Hypothesis C.

"Over the five-year period, there is no significant difference in indicators of completion of studies between treatment groups with more than one year of treatment."

The cross-tabulation of Graduate Status correlated with Number of Years of Help Received (Table 36) demonstrated, for this sample, a statistically significant association of graduation with years of help given, whether EPH or ESL or a combination of the two. There is a greater frequency of graduation associated with students receiving two or more years of help than with students receiving one year or less. The significance was less than 0.01, so the Null was rejected.

Table 36

CROSS-TABULATION OF GRADUATE STATUS CORRELATED WITH
NUMBER OF YEARS OF HELP RECEIVED

GRADUATE STATUS	YEARS OF HELP RECEIVED				Row
	0 years	1 year	2 years	3 years	Total
GRADUATE Count	57	30	16	26	129
GRADUATE Row %	44.2	23.2	12.4	20.2	66.2
GRADUATE Col.%	63.3	54.5	76.2	89.7	
NON GRAD. Count	33	25	5	3	66
NON GRAD. Row %	50.0	37.9	7.6	4.5	33.8
NON GRAD. Col.%	36.7	45.5	23.8	10.3	
Column Total	90	55	21	29	195
	46.2	28.2	10.8	14.9	100.0
Chi Square	D.F.	Significance	Min E.F.	Cells with E.F. < 5	
11.72815	3	< 0.01 *	7.108	None	

This was corroborated by a cross-tabulation of Graduate Status Correlated with Little Versus Much Help which also demonstrated, for this sample, a statistically significant association of graduation with amount of help given. The value of Chi-Square was 9.6 and the probability that such a relationship could occur by chance was less than 0.01. The Null hypothesis was, therefore, rejected. The results of this test of significance are shown below in Table 37.

Table 37

**CROSS-TABULATION OF GRADUATE STATUS CORRELATED
WITH LITTLE VERSUS MUCH HELP**

GRADUATE STATUS		RECEIVED 0 - 1 Year	RECEIVED 2 - 3 Years	Row Total
GRADUATE	Count	87	42	129
	Row %	67.4	32.6	66.2
	Col.%	60.0	84.0	
NON GRADUATE	Count	58	8	66
	Row %	87.9	12.1	33.8
	Col.%	40.0	16.0	
Column Total		145 74.4	50 25.6	195 100.0
<u>Chi Square</u>		<u>D.F.</u>	<u>Significance</u>	
9.6		1	< 0.01 *	

The cross-tabulation of Graduate Status Correlated with Little Versus Much EPH Help likewise demonstrated, for this sample, a statistically significant association

of graduation with amount of EPH help given. The value of Chi-Square was 4.11. For this sample, two or more years of EPH were associated with graduation, with a probability of less than 0.04 that such a relationship could occur by chance. The Null hypothesis was, therefore, rejected.

The results of this test of significance are shown in Table 38. It can be noted that 90.9% of those in two or more years of EPH graduated, as opposed to 84% of those in two or more years of EPH/ESL or ESL alone.

Table 38

CROSS-TABULATION OF GRADUATE STATUS CORRELATED
WITH LITTLE VERSUS MUCH EPH HELP

GRADUATE STATUS		EPH 0 - 1 Year	EPH 2 - 3 Years	Row Total
GRADUATE	Count	127	10	137
	Row %	92.7	7.3	62.0
	Col.%	60.5	90.9	
NON GRADUATE	Count	83	1	84
	Row %	98.8	1.2	38.0
	Col.%	39.5	9.1	
Column Total		210 95.0	11 5.0	221 100.0
<u>Chi Square</u>		<u>D.F.</u>	<u>Significance</u>	
4.11		1	< 0.05 *	

Narrative Description

The student, parent, teacher, counselor, and principal interviews were conducted during the 1984-85 school year. Since it was a very small random sample of students and parents, the results can only give a limited picture of the population studied. However, the teacher, counselor, and principal interviews were of all of the available persons at the school. Their comments are included as background for the inclusion of the Español Para Hispanos class into the school offerings and district support for such a class.

Student Interviews

The five students in the random sample were selected from the EPH classes in 1984-85. They were asked to fill out the questionnaire and were then individually interviewed about their perception of the class and their academic background.

The questionnaires revealed that two of the students had been in the U.S. from three to five years; two had been in the U.S. from six to ten years; and one had been here over ten years. Three of these students had had from three to five years of study in their home countries, and the other two had had from six to eight or more than

eight years. Of those who had been in a bilingual program in the U.S., three had been in for two years or less and the other two had participated for three to five years.

One of the students had less than one year of ESL. Three had from one to two years, and one student had taken from three to five years of ESL. All but one had taken the ESL classes in the target district, or the target school.

One student had been in an EPH class for less than one year, and the other four had been in an EPH class from one to two years. All had studied the EPH at the target school.

One reason for taking the Español Para Hispanos class given by four of the students was that they didn't want to forget Spanish. However, three admitted that they were in the class because their counselors had signed them up for the class, one said it was because the class fit into his schedule, and one student was in EPH because of parent request. Two of the students also felt it was valuable to know another language. However, none had specifically requested the class.

In the interviews, two of the students volunteered the feeling that the class was "okay", and that they were glad they could be in a class "for them". Two students felt that what they were learning would help them in a job later on, and all indicated that they felt comfortable

in the class because they were learning more about their own language and culture.

Parent Interviews

The five parents interviewed were selected at random in 1984-85 from among the parents of students in the Español Para Hispanos classes. Follow-up interviews were also conducted for two of the parents in 1986-87, since they had another child in an EPH class during that school year.

When questioned about the extent of their acquaintance with their children's studies, two of the five parents said they knew what classes their children were enrolled in that year. Three were not acquainted with their child's program of studies.

In response to the question of the ways in which they encouraged their children to take particular subject areas, two said they wanted the student to "take what he (she) needs", but considered that the teachers at school knew what was needed. One said he favored "courses needed for graduation". The other two did not answer.

In contrast, all five were very firm in their support of the EPH class their children were in. Three of the five felt it was important "so (they) won't forget (their) own language." One said "it's their language; we prefer

it", and one considered it important "so they can do more things; (it would be) better if they learned other languages also."

In response to the question of their preference for another subject if their children weren't taking EPH, four of the five had no opinion. One said "as many as possible; whatever will help him in the future."

When questioned about their child's improvement in English during the current year, all five felt there had been improvement. One said it "helps to learn (one's) own language; (it) facilitates another language." Three felt that "she is studying English and has good teachers", "they teach him in school", and "(the) classes she is in help her learn". One parent felt that "(EPH) helps with other languages and other subjects."

Only two of the five were members of the school's Parent Advisory Council, and had attended some parent meetings that year. One of these parents, however, later became the co-chair of the group in 1986-87.

All five were pleased with the bilingual program their children were in. Comments ranged from "It's good", "good; the teachers are good", "helps for the future", and "it's good that they have classes for Hispanics; (it) helps the students", to "(they're) good for everyone; (provide) more opportunities for them."

Two parents felt they needed to become more interested and know more about the program their children were in. One felt that parents could help by supervising their children, and one felt that parents could help by going to classes and meetings at the school. One offered no suggestions.

In the follow-up interviews with two of the parents in 1986-87, they admitted that they wished they had been as active and interested in previous years with their older children as they were during the 1986-87 school year. The two parents were active in the school site Parent Advisory Council during 1986-87 and took part in the parent training activities provided by both the school site and the District Office of Bilingual Education. Both commented that they felt more comfortable that year with the school and about making inquiries about programs, budgets, and processes. They also expressed regret that they hadn't known what their older children took in school and thus had not been able to help them.

Counselor/Principal Interviews

The interviews with the counselors and principal took place during the 1984-85 school year, the year before the principal retired. A follow-up interview took place in 1986-87 with the counselors.

In answer to the question of how students were selected for participation in the Español Para Hispanos class, two of the counselors said it was done upon student request, although they admitted that the counselors did the programming. The other counselor and the principal considered it the responsibility of the counselors to program the students in.

One counselor was of the opinion that all students who requested EPH got in. One said that all got in if there was room. One counselor thought that most, but not all, got in, especially if there were problems in fulfilling the requirements for graduation. However, they admitted that most students did not request the class but were counseled in anyway.

The principal conceded that there was not enough room for all, but explained the difficulty of scheduling special classes for LEP students, given the district staffing allocation for the school. He was emphatic in stressing the need to be creative in using the very limited means given him in order to provide a comprehensive program for all of the students at the school.

The counselors and principal all agreed that the criteria used to screen participants in the EPH class were the students' ability to speak Spanish (as Native Speakers) and if the class fit into the student's schedule. The principal also included as a criterion the

need to take a foreign language to meet graduation requirements. It should be noted, however, that, although strict foreign language graduation requirements were not adopted till 1985-86 in the target district, the principal had always had as one of his objectives the provision of classes that would allow students to meet the state university requirements for admission.

One of the counselors did not think there were any tests given as a prerequisite for the class, and one thought that the test consisted of verifying if the students spoke Spanish, although both agreed that the teachers decided on the level. The other counselor and the principal both referred to the teacher-made oral test. All agreed that teacher approval was not needed to have the student enroll in EPH except in cases where the student did not pass the initial test.

If the student did not make the request to take EPH, the counselors did not routinely counsel the student in, although one counselor said it was more a matter of space. The principal thought the students were "sometimes" counseled into the class.

On the other hand, if the student did not want to take the class but his/her parents did, the principal would "counsel the student to take the class if it fit in with his/her schedule and graduation requirements". One of the counselors would "go along with the parents because

they are ultimately responsible." The other two counselors would take student wishes into account, because students "won't take EPH if they don't want to." They offered the thought that parents "seldom ask."

If there were too many students requesting EPH for the available space, two of the counselors would give preference to Sophomores and students with low academic skills in their own language. The principal would give preference to those needing a foreign language for graduation or college entrance. The other counselor would give preference to those who were college bound and those who had higher grades.

The counselors and principal all agreed that EPH is "helpful to the students in a bilingual program" and "helpful to a student not otherwise in a bilingual program." Additionally, two of the counselors indicated that they thought EPH was either "great" or "appropriate" for students in college-preparatory courses.

In follow-up interviews in 1986-87, the counselors indicated that they were comfortable with the new procedures started that year for identifying and placing LEP students into appropriate classes. The new procedures included consultation with parents before placing students into classes. Additional classes in EPH were initiated in the 1986-87 school year, and counselors used the new criteria to program students in.

Teacher Interviews

The two teachers currently teaching the Español Para Hispanos classes in the 1984-85 school year, were interviewed and their classes were observed during the Fall and Spring semesters of the 1984-85 year. A third teacher, who had taught an EPH class the previous year, and who was still at the school, was also interviewed. The only other teacher to have taught an EPH class during the years covered by the study, was no longer at the site.

All three of the teachers were native speakers of Spanish. One teacher had a Master of Education in Social Science with a Spanish minor, and had also taken college level courses in a Spanish speaking country. One teacher had completed secondary school and some college work in South America before immigrating to the U.S. and completing work toward a Bachelor of Arts degree here. The other teacher had a B.A. and an M.A. in Philosophy and Latin and a Ph.D. in Spanish, with a French-English minor. They all had, in addition, secondary and bilingual teaching credentials. One had 25 years of teaching experience, one had eleven, and one had ten.

Two of the teachers had volunteered to teach EPH, and, indeed, one of them had started the classes at the school fourteen years before. The other teacher had been asked by the principal to teach the course, but indicated

that it would have been voluntary had it been known that the class was available.

There was agreement between two of the teachers that programming difficulties and the lack of teachers contributed to the fact that not all students in the bilingual program were enrolled in an EPH class. The other teacher thought that they were. However, only one teacher considered that there was a bilingual department, organized by the language the students speak.

All three had taught the EPH-3 course, which stressed grammar. One teacher had also taught the EPH-4 and EPH-5 levels, which stressed composition and literature. And all three agreed that the prerequisite for the course was for the student to be a native Spanish Speaker, although some who spoke mostly English but understood Spanish could also be admitted with teacher permission.

The three teachers were aware that the courses carried credit towards college preparation, and that the state university system gave credit as Spanish 215 and Spanish 220 for students completing the courses. All admitted that students did not regularly take the Advanced Placement examination in Spanish both because the school did not stress the test, and because the students already received advanced placement credit.

Although only two of the teachers felt that they had the support of the principal and the counselors for the

class, all felt they had the support of other language teachers. However, there were mixed feelings about the support of other teachers in the school, because they felt that not all were aware of the class. As to the support of the Central District Office and the Central Office of Bilingual Education, there was also a mixed reaction. Two of the teachers conceded that the Bilingual Office had been somewhat supportive at times, but not during the current year. Two felt the Central District Office did not help, and the other considered that the only time the Central District Office had helped had been when the classes were started in the early 1970's and the credit was established with the university.

When asked about recommended changes, all three teachers indicated a need for more materials, and updated textbooks, as well as literature and grammar books. One specified a need for more teachers and class sections because some students had had to be turned away. A placement/achievement test specific to the courses was also requested.

It should be noted that in 1986-87 a revision was made, with the participation of the EPH teachers, in the EPH courses so that the curriculum could also include Junior High courses at the feeder schools. Additionally, a placement test was devised, which was to be pilot-tested in the 1987-88 school year.

In the observations of the classes, it was noted that there was a great emphasis placed on grammar, although literature was also taught. Speakers from community agencies working with Hispanics gave presentations to the classes on a regular basis, and students were urged to remain in contact with them.

One of the things that seemed most striking to the observer was the atmosphere which prevailed in the EPH classes. Students seemed generally at ease and willing to participate, even though many admitted they didn't particularly care for grammar. But they equally admitted that they felt the teacher cared about them and respected their background.

The feeling of being in a congenial place must have carried over because many students went back to the classroom for lunch, or used it for meetings of the "La Raza" club, the core of which were members of the EPH classes. Students could also be found in the classroom(s) before and after school, even if the teacher was otherwise occupied and not "teaching the class". The students used the time to talk, or to catch up on other work.

Summary

The study set out to test the hypothesis that secondary age Limited English Proficient students who receive

primary language arts instruction, demonstrate higher levels of English language acquisition than do comparable students who do not receive this instruction. Research questions were formulated, and the research hypotheses, which were developed from these, form the basis for the statistical procedures carried out.

The tests of significance to which the data were submitted revealed somewhat mixed results. To the question on achievement, there were several answers.

In the Tenth grade, a significant difference in means was found among groups for both Reading and Language Arts. The Multiple Classification Analysis suggested that between groups, the All Others group did best and the EPH group was next. In considering the LEP-only groups, the EPH group had higher achievement. The Null hypothesis was rejected for both Reading and Language Arts scores comparisons.

In terms of gain, for Tenth grade, there was no statistically significant difference between groups. Therefore, the Null hypothesis was accepted for this comparison.

For the Eleventh grade, there was a significant difference in means between groups for the Reading scores, but not for the Language Arts scores. The Multiple Classification Analysis suggested that the All Others group

had the highest achievement in Reading, with the EPH and Neither groups almost equally next.

When the comparison was done for the LEP-only groups, again the two were almost equal, with the Neither group marginally higher. The Null hypothesis was rejected for the Reading scores comparison.

For the Language Arts scores, Reading Gain, and Language Arts Gain comparisons, there was no significant difference in means found. Therefore, the Null hypothesis was accepted for these comparisons. Some differences were suggested but not at a statistically significant level.

Again at the Twelfth grade level, there was a mixed result. In the Reading achievement comparisons, there was no statistically significant difference in means between groups. Therefore the Null was accepted for this comparison, as it was for the comparison of Reading Gains, which also failed to show a significant difference between groups.

In terms of Language Arts scores for Twelfth grade, there was a significant difference in means between groups. The All Others group demonstrated the highest achievement and the EPH group was next. The Null was rejected for this comparison.

For the LEP-only groups, there was no significant difference in means, although the Multiple Classification Analysis showed the EPH group to have somewhat greater

scores than the other groups. The Null was accepted for this comparison.

In the comparisons of Gain in Reading, the Null hypothesis was accepted for all groups and for the LEP-only comparisons. In the Twelfth grade, Gain in Language Arts showed a significant difference in means between all groups and between LEP-only groups, with the ESL group demonstrating greater gain in both comparisons.

The cross-tabulations of Graduate Status Correlated with Participation in Treatment Group, showed a statistically significant association of completion of studies with participation in the EPH treatment group in the Tenth and Eleventh grades. There was also a statistically significant association with participation in both the ESL and EPH groups in the Twelfth grade. The Null hypothesis was rejected for these comparisons.

The cross-tabulations of Graduate Status Correlated with Participation in EPH or Non-EPH Treatment Group, also demonstrated a statistically significant association of completion of studies with participation in the EPH group. Therefore the Null hypothesis was also rejected for this comparison.

Cross-tabulations of Graduate Status Correlated with Sequence of EPH/ESL Treatment in Grades 10-11, did not demonstrate statistical significance, although the sequences with EPH treatment approached significance at the

0.07 level. The Graduate Status Correlated with Sequence of EPH/Neither Treatment in Grades 10-11 also failed to demonstrate statistical significance. Therefore, the Null hypothesis was accepted for both.

For the correlation of Graduate Status with Total Aid (Years of Help, EPH and/or ESL), there was a statistically significant association shown by the cross-tabulation. The cross-tabulation of Graduate Status Correlated with Little versus Much Help, likewise showed a statistically significant association. The Null was rejected for these research hypotheses.

The cross-tabulation of Graduate Status Correlated with Little versus Much EPH similarly demonstrated a statistically significant association between several years of EPH treatment and completion of studies.

There was, in addition, a slightly higher percentage of those in 2-3 years of EPH completing studies than those in 2-3 years of Help, EPH and/or ESL. The Null hypothesis was rejected for this relationship.

The results of the questionnaires and interviews were also summarized in this chapter. The random samples of students and parents generally showed support of the Español Para Hispanos classes, although neither parents nor students had an entirely clear idea of the procedures for followed enrollment nor of the options presented by the school.

The counselors also seemed to have somewhat mixed messages on pre-requisites and programming during the initial interviews. In the follow-up interviews in 1986-87, both parents and counselors showed a greater knowledge of procedures, which they had, incidentally, helped to re-design.

It was apparent that counselors, teachers, and principal were all supportive of the EPH classes. In 1986-87, they were instrumental in adding more sections of EPH to the schedule. In addition, the parents, perhaps due to their taking a more active part in the Parent Advisory Council at the school, expressed regret that they had not taken the same kind of interest and been as active in the parent group when their older children had attended the same school.

The results of the tests, interviews, and observations, will be examined at greater length in Chapter 5.

Chapter 5

Within the last few years, much controversy has been generated in this country by the varying perceptions of how best to meet the needs of ever-growing numbers of Limited English Proficient students in public schools. It is a problem that is not unique to the United States, but has been the focus of much acrimonious debate here. This is especially true with regard to the secondary school level, where there is a lack of clear-cut, well known, and widely-accepted theoretical bases for determining the most effective methods of providing legitimate equal educational opportunities for students with greatly varied backgrounds and linguistic talents.

Limited English Proficient students at the secondary level have a limited amount of time in which they must accomplish two distinct tasks: learning a new language and attaining the necessary cognitive growth in academic subject areas needed for graduation or for further study. These students must acquire their second language while using that same language for learning content areas.

It was with these students in mind that the present study was proposed. The study had as its principal focus

the applicability to secondary age students of James Cummins' theory of bilingual proficiency which stresses the developmental interdependence of language acquisition. This theory postulates that, for younger children, the development and strengthening of the first language can ultimately lead to a more rapid and efficient acquisition of the second.

Very little research has been conducted at the secondary school level to discern if such linguistic interdependence also obtains for older children. One reason for the paucity of research at this level may be the limited number of school programs that provide for the "development and strengthening of the first language."

The present study specifically set out to test the hypothesis that secondary age Limited English Proficient (LEP) students who do receive Primary Language Arts instruction demonstrate higher levels of English acquisition than do comparable students who do not receive this instruction. The primary language of the students in the study was Spanish.

The study used a quasi-experimental research design which compared the effect of different treatments on two relatively equal groups of Hispanic LEP students in a single urban high school over a five year period. Achievement and completion of high school work were examined statistically for students enrolled in English as a Second

Language (ESL) and Español Para Hispanos (EPH) classes during the course of the study. Additional comparison groups were made up of Hispanic LEP students not in either treatment group and all other Hispanic students in attendance at the school during the years of the study. School and district records were used and interviews were conducted.

Background Information

Any analysis of the effects of certain educational treatments must take into account the milieu in which the students operate, and other intangible factors which support or hinder their success in school. Because community attitudes and setting have much to do with policy decisions and the perceptions of the participants, it becomes necessary to take note of these factors in order to place the results of the study in perspective. And only if these factors are considered can the observed treatment effects be understood.

For this study, factors which must be considered are attitudes in the larger community towards language minorities, official district policies with regard to programs of instruction for these students, and any conditions which facilitate or impede student progress towards completion of studies. These blend in with other issues,

such as discontinuity between home culture and school, which face immigrant and "native" alike.

The effects on students of community competition for housing, employment, and political influence in economically uncertain times, which can take on ethnic or racial overtones; urban-rural shifts of populations; and majority versus minority feelings in other areas, such as, for example, language use, all have a bearing on the successful completion of studies. So, too, do students' individual feelings of personal self-worth and validation.

All of these factors, however, cannot be quantified or included as attributable causes for effects observed. They must, nevertheless, be mentioned as unquantifiable variables influencing the study. They impinge on, and mitigate, results, but their effects cannot be directly substantiated. They do, however, establish the climate surrounding the phenomena which are studied.

Interviews/Observations

As part of the study, five students and five parents, in a random sample, were interviewed to elicit background information on community support for the program at the target school. The questionnaires, which were filled out by the students, provided information on their length of residence in this country, previous schooling, prior

language training, either English or Spanish, and their reasons for taking an Español Para Hispanos class.

The questionnaires revealed that the shortest length of time these students had been in the U.S. was three years, and the longest over ten. All had had no less than three years of study in their home countries. All had taken ESL classes, from a minimum of less than one year to a maximum of three to five years, either in the same school or same district. All had taken no more than one to two years of Español Para Hispanos. These classes had been taken at the target school.

Although most of the students gave "not wanting to forget Spanish" as a reason for taking the EPH class, most admitted that they were there because they had been signed up for the class by their counselor or parent. One stated that it was because the class fit into his schedule. None had specifically requested the class.

Most intriguing, though, was the reaction of the students once they were in the class. In interviews, and in the observations, these five students, as well as their other classmates, appeared to participate willingly and "enjoy" the class. Even though many indicated that they did not care for the emphasis on grammar, few asked to withdraw from the class, although this was an option.

The responses of the interviewed students were generally to the effect that they felt the class was for

them, that it helped them to learn their own language and culture, and that the teacher respected them and their background. They indicated that they felt at ease in the class because they could "relate to" what the class was about. As was observed in Chapter 4, many EPH students did seem to use the classroom(s) as sort of a "home base" from which they carried out their other school activities.

This seems to have been a student-initiated reaction only, because the five parents who were interviewed, in general, did not seem to be very aware of the students' programs and thus were not able to provide advice on options. Most were not active in the parent group that year. All, however, expressed support for the idea of an Español Para Hispanos class.

Two parents, in a follow-up interview in 1986-87, expressed regret that they had not taken the same kind of interest and been as active in the parent group in previous years when their older children attended the same school. Both in the initial and follow-up interviews, the parents expressed support for the teachers at the school, considered the instruction good, and were willing to have the teachers make the choice of program for them.

The counselors, EPH teachers, and principal, were all supportive, in varying degrees, of the EPH classes. They were instrumental in adding more EPH sections to the schedule, as well as in the development of new procedures

to identify and place LEP students into classes. The teacher interviews, moreover, revealed a core group of well-educated native Spanish Speakers who exhibited genuine interest in the students, and a willingness to do extra work in order to keep the class a viable option in the school's offerings.

All of the attitudes commented on above, could have influenced the results found in the study. They provided a context for the study.

Other Factors

The study covered a period of five years at one urban high school. However, since available records were used, the actual study did not take that long. Even so, during the time the study was formulated and conducted, many events transpired which had an effect on the kinds of programs which could be offered to LEP students and those which were actually carried out. These events, in turn, can also be said to have influenced the study.

The school site itself underwent change. Students in attendance before the 1981-82 school year endured the existence of a three-year long major building program. Classes were conducted in portable classrooms while the main classroom building was razed and a new one built.

During the same period the district had a change of superintendents, and a series of administrative reorganizations, each with the consequent round of interim policy decisions. This series actually began with the death of the superintendent in 1973, followed by two interim superintendents, one permanent superintendent in 1976, another interim, and another permanent superintendent in 1981-82. There were, in addition, two more major district administrative reorganizations in 1983 and 1984.

Inevitably, this kind of administrative instability has an effect on site programs. The results are an inability to plan on a long-range basis, a district-wide confusion regarding policy, staff uncertainty with regard to working conditions, and consequent staff morale problems. These make themselves felt to students in terms of expectations for them, and the kinds of program offerings available to them. Students, in turn, respond with varying levels of achievement and attendance.

The central administrative directives, and curriculum and other assistance were, thus, and almost inevitably, sporadic and somewhat whimsical, as were the ever more stringent budgetary allocations from the legislature, during the same time span. The effects of a curtailment in the budget were exhibited in terms of both supplemental classroom assistance and basic allocations to sites.

The site, additionally, or perhaps as a result of the larger district instability, also underwent administrative change during the years of the study. These new factors included changes in administrative staff, i.e., principal, assistant principals, and dean, as well as transitions in counseling staff.

On the other hand, perhaps the greatest, if not the only, stable contributing factor for students was the school faculty, bilingual and monolingual, many of whom had been there for a number of years. The bilingual faculty members, and, in particular, one of the teachers of Español Para Hispanos, were instrumental in initiating and developing the program for LEP students at the site and fighting for its survival.

In addition to ESL, bilingual courses were begun in Mathematics, Social Studies, and Science during the 1970's. These continued on an intermittent basis throughout the time of the study. Towards the end of the period of the study, Sheltered-English content-area classes were also added through the efforts of the bilingual faculty. The EPH courses were approved by the University of California, Berkeley, for Advanced Placement and course credit in the 1970's, largely through the efforts of one EPH teacher, who was, and still is, also the Chairman of the Foreign Language Department at the school.

As additional factors, during the years covered by the study, the district Office of Bilingual Education was dismantled for a time, as a result of a year-long struggle between the district administration and the community over the adoption of a Bilingual Master Plan, and litigation against the district was initiated by parents of LEP students. The result of this was that parents were, in turn, sued by the district, although this suit was dismissed by the court.

The turmoil caused by this situation, however, had far-reaching effects within the community, and created a series of coalitions aimed at influencing policy. A truce, in the form of a Court-approved Consent Decree was signed in the Spring of 1985, about the time the final test and record data were gathered for the study.

In the rare climate that thus prevailed, again virtually the only stability for students was that which was provided by site faculty and staff, because there was no direction from the central bilingual office. Students were indirectly affected by the strong community reaction, and directly by the district policy decisions.

Also during the final year of the study, the district was once again entering a period of struggle. This time the conflict was between the existing Board of Education and the superintendent. This occurred in the midst of a controversial election for Board members. Although

three of the slate of Board members favoring the Superintendent were elected in the Spring of 1985, further controversy erupted concerning budget and personnel issues. The superintendent was allowed to resign and the remaining contract was bought out by the district in the Fall of 1985. Another interim appointment was made and a new reorganization then began, thus rounding out the series of eight superintendents within a twelve year period.

This complicated series of events is included here solely for the purpose of establishing the ambience, conditions, and unavoidable difficulties under which site staff have had to work, as well as under which students study. It is also included to point out some of the implications that the lack of clear-cut, and well-planned district policies can have on site programs, whether bilingual or mainstream.

In terms of educational administration, this also points to the need for stability in order to enable the central-administration staff to provide needed assistance to sites, as well as to establish coherent correlation among all district programs and curricula. Good intentions, great effort and ability are simply not enough. Such a lack of stability also does not permit the effects of these efforts to become established long enough to make a difference.

Since the site is located in a low income, high crime, inner city area with a highly transient population, it can be more readily understood that there is a large variety of outside factors, over which they have no control, which impinge upon completion of studies for students, and also influence achievement. Any study dealing with such a situation must take into account these external factors, or at least acknowledge the fact that they will have an influence on the outcome.

The present study has not included these factors as variables in any of the statistical analyses. It would, indeed, be almost impossible to do so, but recognition must be given to the fact that they do exist and can have played a part in the results.

Achievement and Gain

The data from standardized tests in English were submitted to analyses of variance in order to determine the presence or absence of statistically significant differences in means among the groups. Reading and Language Arts scores from the Comprehensive Test of Basic Skills were compared for all groups and for LEP-only groups. Gains were also examined for these groups, by grade level. A Multiple Classification Analysis indicated which group(s) had higher scores or greater gains.

Reading

In terms of language acquisition for LEP students, as measured by standardized tests in English Reading, the answers to Question 1 were somewhat mixed. Question 1 considered whether or not type of treatment was associated with a significant difference in Achievement in English.

At the Tenth and Eleventh grade levels, there was a statistically significant difference demonstrated in the Reading scores. The All Others group, which included Fluent English Proficient Hispanic students as well as those for whom no oral English score was available, did best, and the EPH group was next. The ESL and Neither groups had negative values in Tenth; and ESL both years.

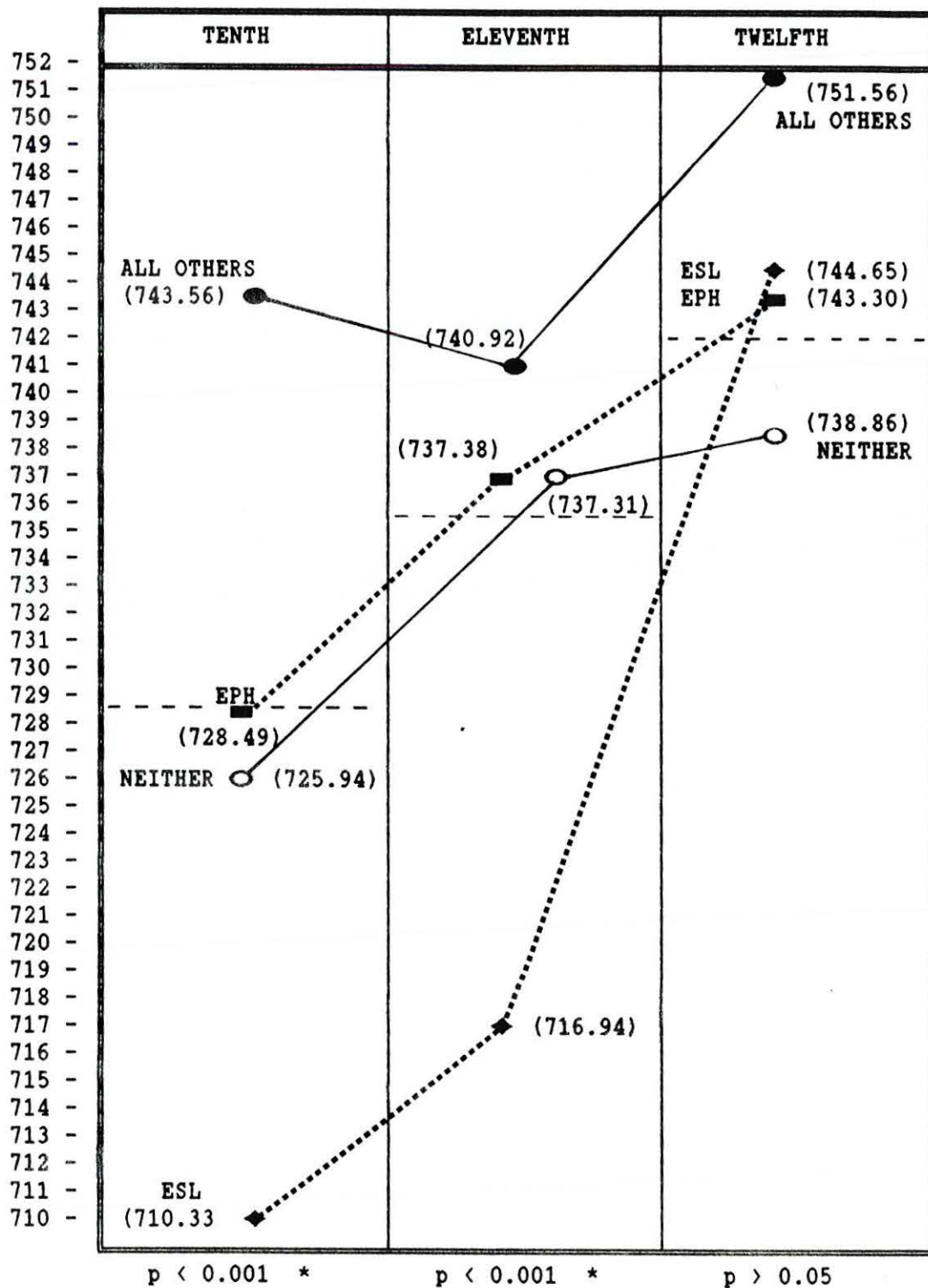
In the comparisons with LEP-only groups, the EPH group appeared to do best in the Tenth grade. In the Eleventh grade, the Neither and EPH groups did almost equally well, with the ESL group showing a decidedly negative value in all of the comparisons.

At the Twelfth grade level, none of the comparisons demonstrated a statistically significant difference in means. However, this time the Neither group showed negative values in the comparison. The results of the Multiple Classification Analysis are shown in Figure 1.

The analysis of Gains in Reading did not show a statistically significant difference at any grade level.

Figure 1.

Adjusted Means in English Reading for Treatment Groups by Grade Level



However, among the LEP-only groups, the EPH group showed somewhat greater gain in the Tenth and Eleventh grades. In the Twelfth grade, it was the ESL group which exhibited somewhat greater gain.

Language Arts

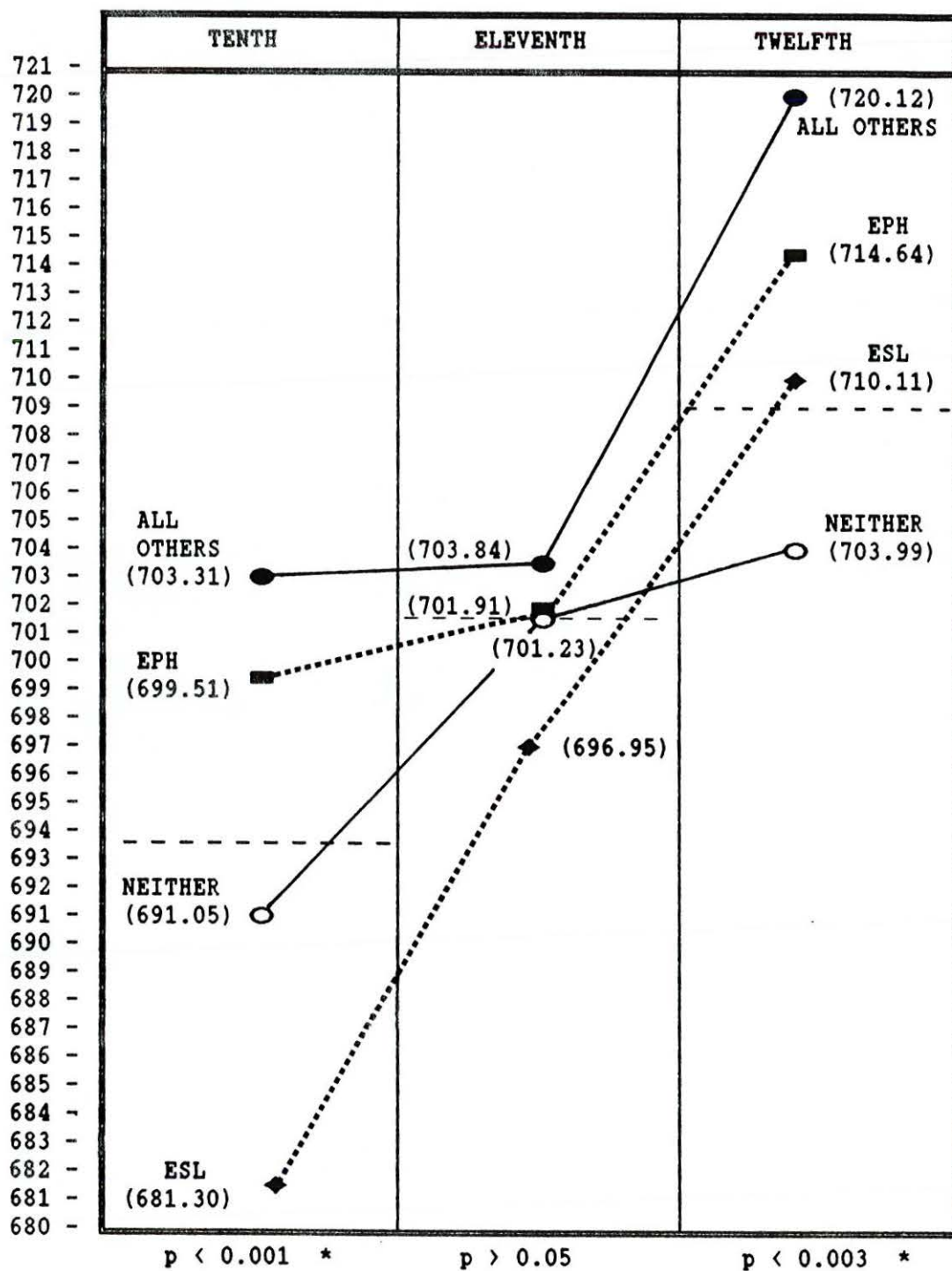
The analysis demonstrated a statistically significant difference in means in Language Arts scores among the groups in Tenth and Twelfth grades, but not in the Eleventh grade. The All Others group showed higher scores than did the other groups, followed by the EPH group, at both the Tenth and Twelfth grade levels. Results of the Multiple Classification Analysis are shown in Figure 2.

Among the LEP-only groups, there was a significant difference in means at the Tenth grade level. The EPH group demonstrated higher scores than did the other LEP groups. Although there were no statistically significant differences at the Eleventh and Twelfth grades among the LEP-only groups, the EPH group had somewhat higher scores than did the others.

Analysis of Gain in Language Arts showed a statistically significant difference only at the Twelfth grade level. At that grade level, the ESL group demonstrated the greatest gain among all the groups and among the LEP-only groups.

Figure 2.

Adjusted Means in Language Arts for Treatment Groups by Grade Level



Completion of Studies

The second question examined statistically was that of trying to determine if there was a treatment associated with greater success in the completion of high school work. For the statistical analysis, completion of studies was correlated with participation in each of the treatment groups.

Since, at the time the study was conducted, there was no district procedure to identify drop-outs, and also since most students who dropped out during the years of the study did not do so formally, the indicators used in the study for graduation or non-completion of high school work were the presence or absence of Spring tests in the Twelfth grade. For drop-outs at the Tenth or Eleventh grade, the indicators were a pre-test, but no post-test thereafter.

Records

Based on these indicators, only 19 students were shown to have dropped out during the Tenth grade and 111 during the Eleventh grade. Of the Twelfth graders (all years) in the study, there were 140 who seem to have started but did not finish. A total of 270 were, therefore, considered to have dropped out during the years of

the study. This amounts to 37% of the 729 Hispanic students in the study. Since these were based on the indicators stated above, they were the figures which were used for the statistical analysis.

In fact, however, this figure was reduced after an actual review of the transcripts of all students who had taken EPH and for whom there was a graduating class within the 1981-85 time-span. Twenty-one students were counted as drop-outs as per the criteria shown. Their transcripts revealed, however, that these students had, in fact, graduated. This left a total of twenty-two, or approximately 10%, out of the 221 EPH students, whose class reached Twelfth grade, who did not graduate from this school.

Of these twenty-two, five were dropped by the school because they did not meet graduation requirements; eight transferred to another school; one was in attendance during 1986-87 after a two-year interval; two were dropped by the school as over-age, and they subsequently enrolled in the Adult School; and two were dropped by the school for non-attendance. Two students went back to Mexico with their families, but did not request a transcript; one got married and left school; and one student moved to an unknown destination.

In summary, other than the students who transferred or moved, only six of these EPH Seniors did not attempt the completion of their studies at the school. The two

students who were dropped because of age, and the five who did not meet graduation requirements, were still in attendance until that point and were attempting to complete their studies. One student returned after a two-year interval. The students who transferred asked for their transcripts to be sent to their new school, and it can be assumed that they would at least attempt the completion of their studies.

The total Hispanic drop-out figure would thus drop to 233 and the drop-out rate would be closer to 31%, if these last figures are taken into account. This would mean approximately 2.7% of all students in EPH dropped out. The drop-out rate, meanwhile, for LEP students, all languages, at the site in 1985-86 was about 46% (153 out of 330).

The official indicators for this rate, adopted by the district in 1985-86, are students who leave school for six weeks or more but do not indicate where they are going or request a transcript to be forwarded. For the total school, the 330 represents about 21% of the total 1514 students in the Spring of 1986.

Cross-Tabulation

The results of the cross-tabulations of Graduate Status by Participation in Treatment Group, demonstrated

a statistically significant association of completion of studies with participation in the Español Para Hispanos group in the Tenth and Eleventh grades. In comparison to students in other groups, a greater percentage of students who participated in the EPH treatment group in the Tenth and Eleventh grades, eventually graduated.

In the Twelfth grade, there was also a statistically significant association with participation in both the ESL and EPH groups. In both groups, the percentages of students who graduated, almost equally high at 85.2% and 86.4%, are greater than those of students in other groups. The results of these tests of significance are shown as a graph in Figure 3.

The cross-tabulations of Graduate Status by Participation in Treatment Group: EPH or Non-EPH, also demonstrated a statistically significant association of completion of studies with participation in the Español Para Hispanos group. At each grade level, the EPH group demonstrated a greater percentage of students who graduated than did the other Non-EPH groups.

For students in EPH in the Tenth grade, the percentage of graduates was 48.3%. For students in EPH in the Eleventh grade, the percentage of graduates was 65.6%, and of those in EPH at the Twelfth grade, 85.2% graduated. The results of these tests of significance are shown in Figure 4.

Figure 3
Graduate Status by Group

Key: % Graduated % Did not Graduate

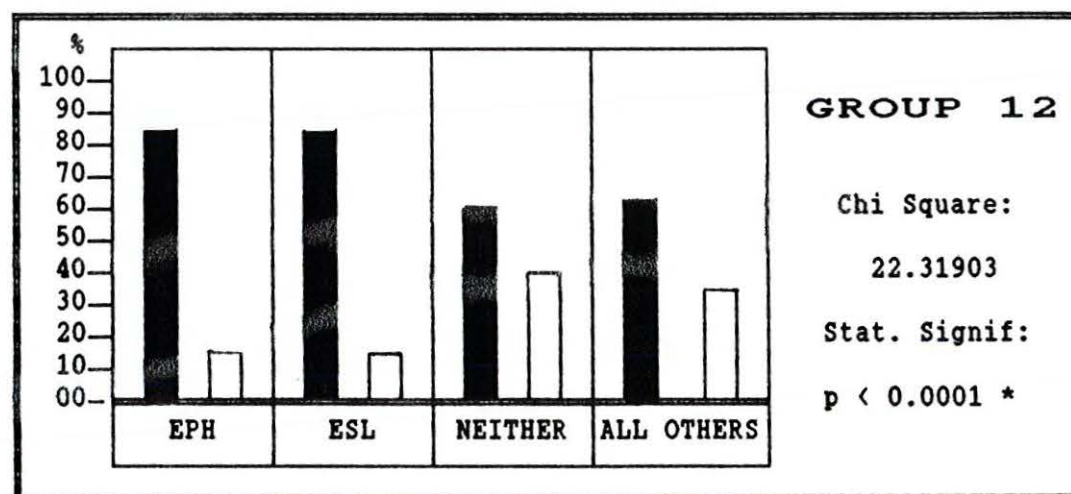
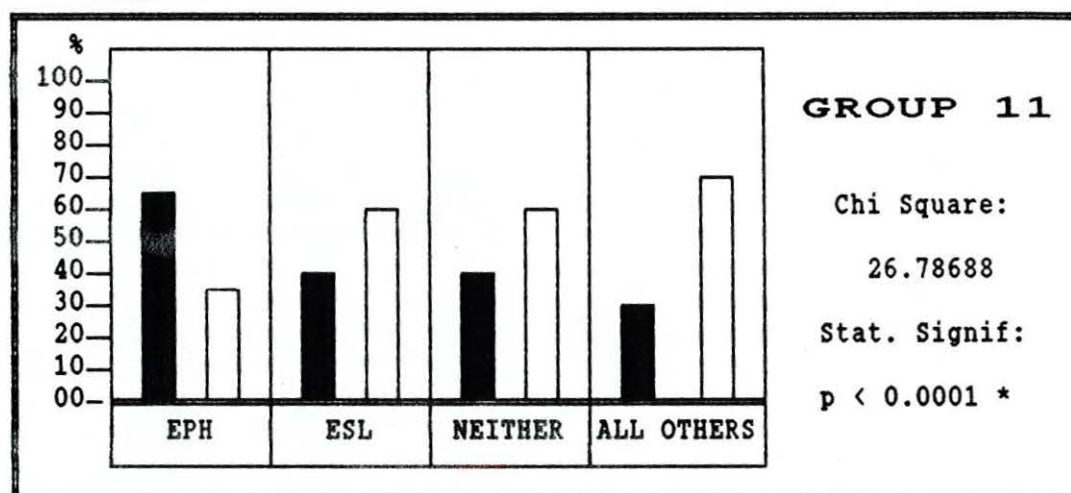
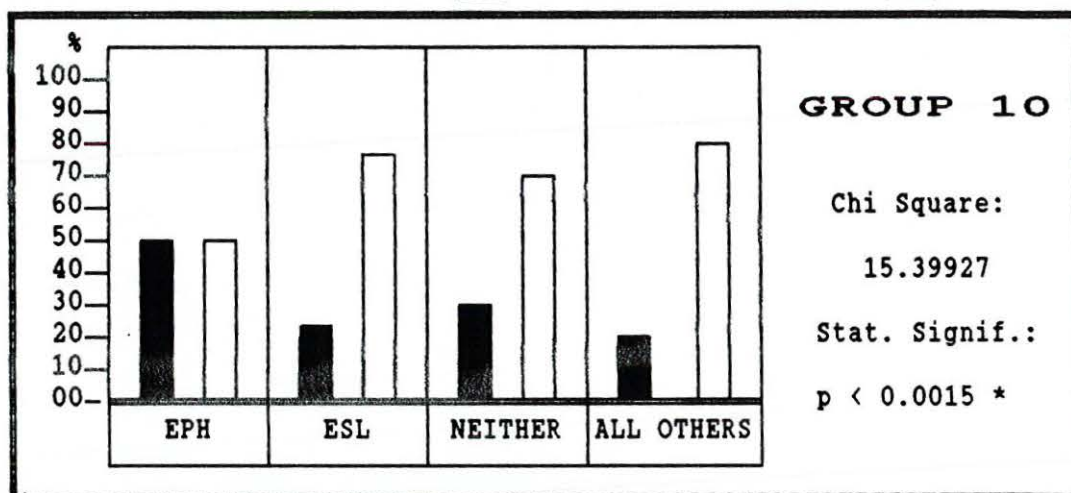
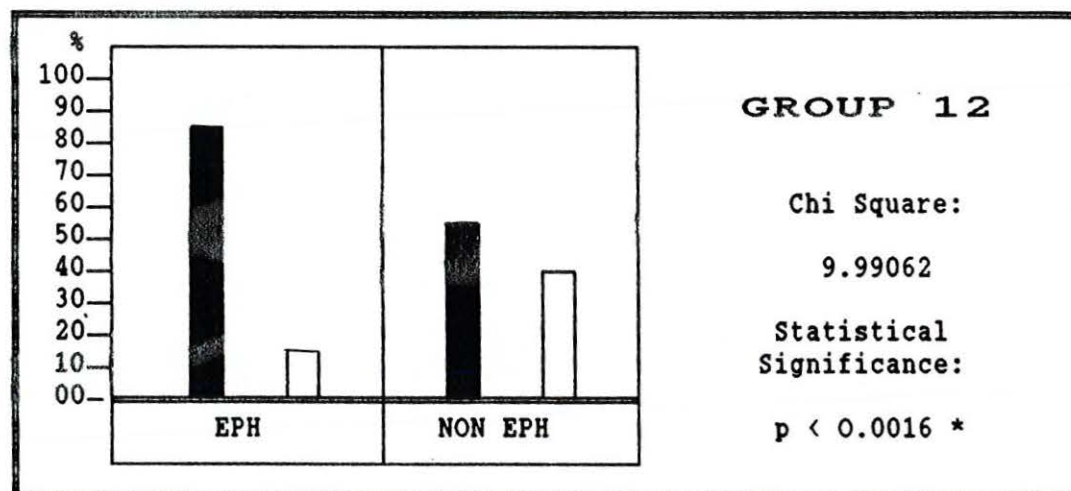
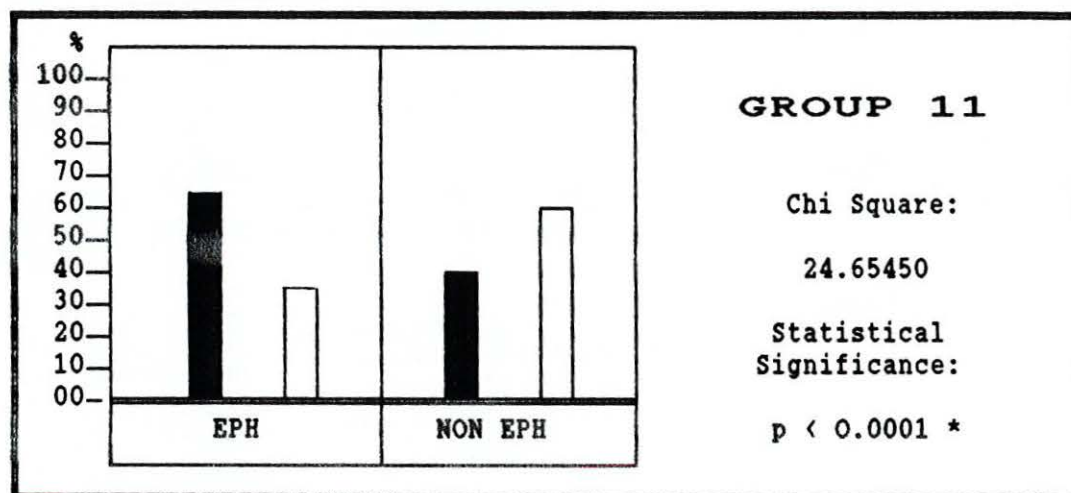
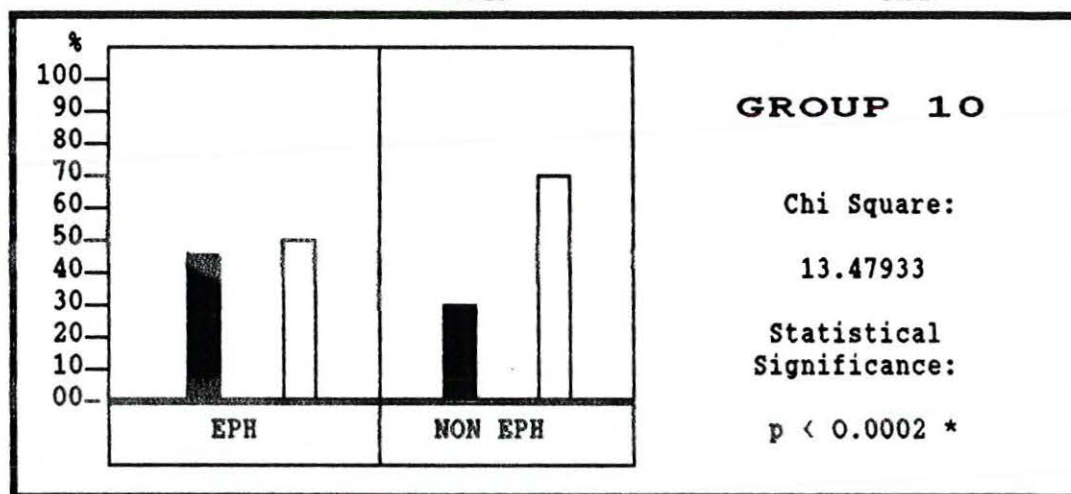


Figure 4
Graduate Status by EPH/Non-EPH

Key: % Graduated ■ % Did not Graduate □



The Cross-tabulations of Graduate Status by Sequence 10-11 (EPH/ESL) did not demonstrate statistical significance, although the sequences with EPH approached significance at the 0.0786 level. The Cross-tabulation of Graduate Status by Sequence 10-11 (EPH/Neither) also failed to demonstrate statistical significance. These are shown in Figure 5.

For Graduate Status by Total Aid (Years of Help:EPH or ESL), there was a statistically significant association for this sample, shown by the cross-tabulation. Likewise, the cross-tabulation of Graduate Status by Little versus Much Help, showed a statistically significant association with completion of studies for this sample.

The cross-tabulation of Graduate Status by Little versus Much EPH similarly demonstrated a statistically significant association between several years of EPH and completion of studies. There was, additionally, a slightly higher percentage of those in 2-3 years of EPH who completed their studies than of those who received 2-3 years of Help:EPH or ESL. The students with 2-3 years of EPH had a 90.9% completion rate and the students with 2-3 years of Help: EPH or ESL showed an 84% completion rate. These results are shown in Figure 6.

It should be stressed that these results are presented here as only for the sample. It may be not be possible to generalize from them to a larger population.

Figure 5

Graduate Status by Sequence 10-11

Key: % Graduated % Did not Graduate

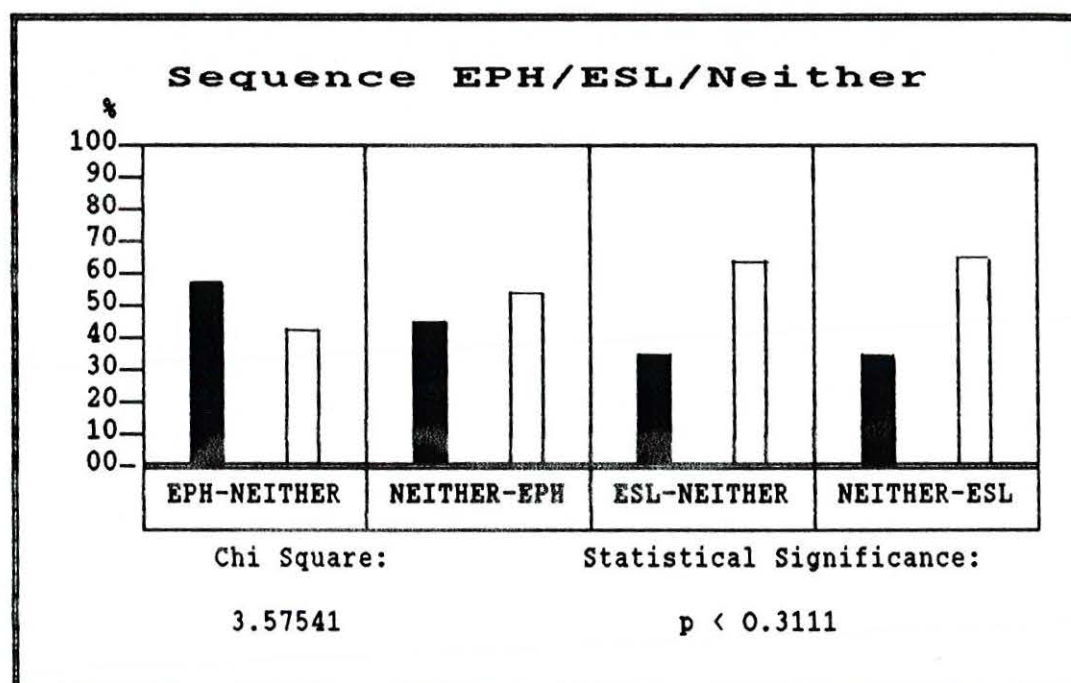
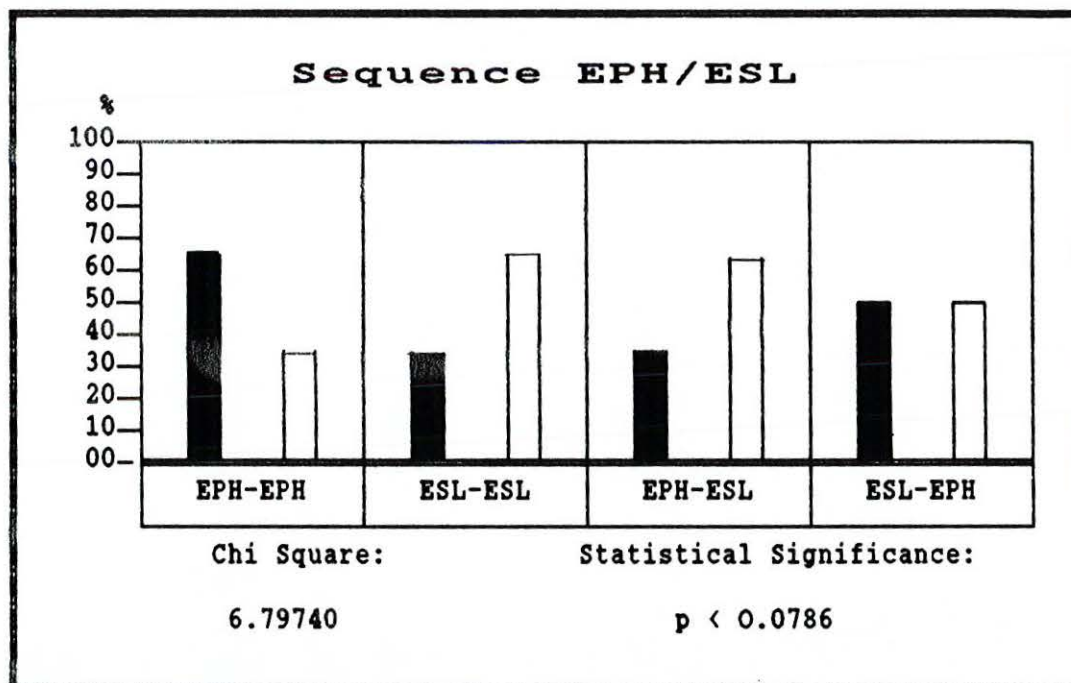
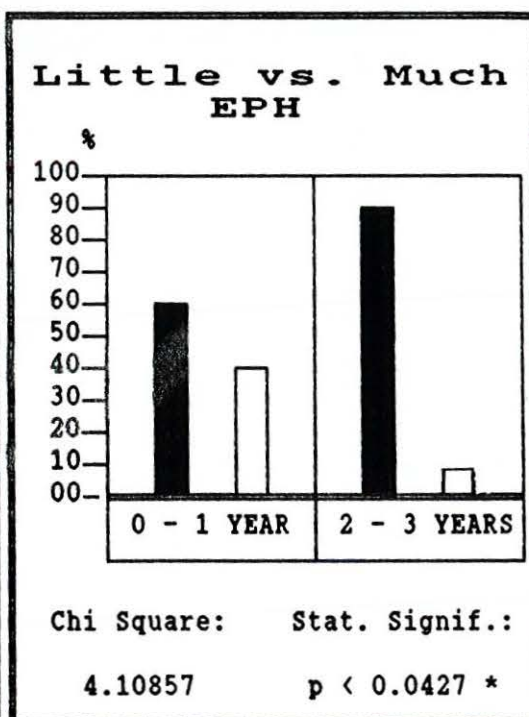
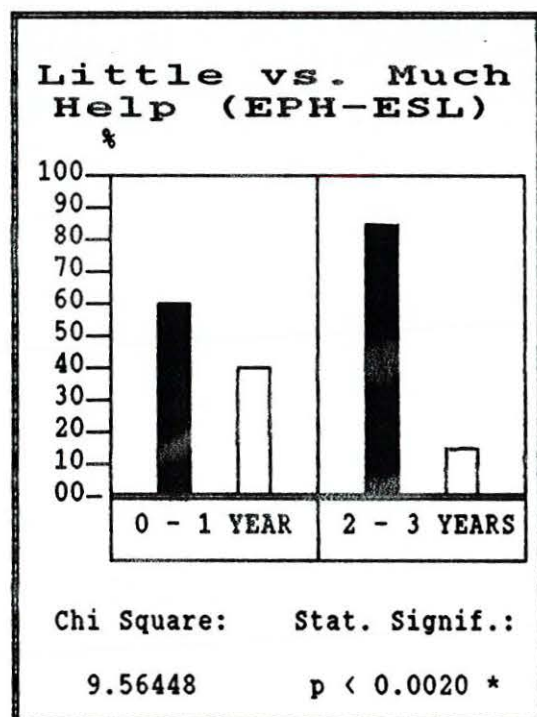
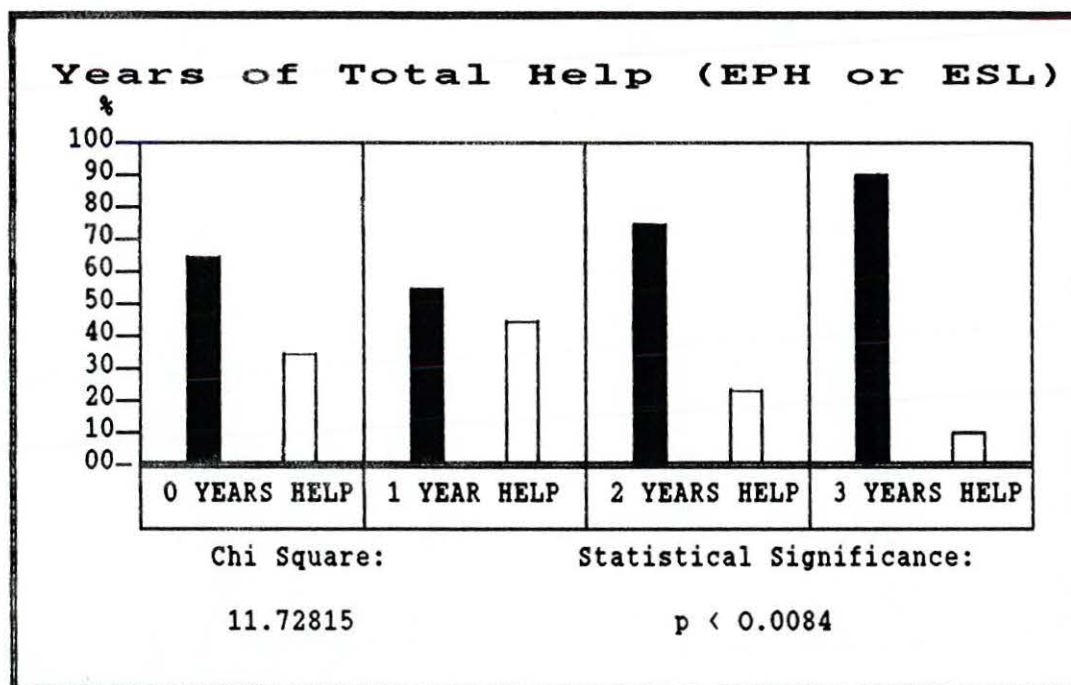


Figure 6

Graduate Status by Years of HelpKey: % Graduated % Did not Graduate 

Conclusions

The study set out to test the hypothesis that Limited English Proficient students who receive primary language arts instruction at the secondary school level demonstrate higher levels of English language acquisition than do comparable students who do not receive this instruction. It was based on James Cummins' theory of linguistic interdependence in second language acquisition which posits that the development and strengthening of the first language can lead to a more rapid and efficient acquisition of the second.

As it applies to the secondary students in this case study, the hypothesis cannot be said to have had an overwhelming affirmation. However, even though the results of the tests of significance are not completely conclusive, they are suggestive. Perhaps a cautious and qualified affirmative would be more in order.

At the Tenth grade level, the Español Para Hispanos group demonstrated a statistically significant higher level of achievement in both Reading and Language Arts than did the other LEP groups. This would tend to suggest a higher level of second language acquisition for those LEP students who received primary language arts instruction.

However, in the comparison which included the All Others group, wherein there were Fluent English Proficient students, the EPH group only came in second. The scores for the EPH group were higher than the Neither group for all years, and substantially higher than the ESL group in Tenth and Eleventh. This finding suggests that ESL alone, without primary language arts instruction, is not sufficient to promote the acquisition of the second language, at least for this sample.

At the Eleventh grade level, again, the All Others group had a higher level of achievement in Reading, with the Neither and EPH groups following with almost equal scores. This raises the questions of why "no help" should be almost as effective as "some help", and of why ESL is relatively not effective at all.

An explanation might be that students in the Neither group could have received help in the Tenth grade but not in the Eleventh grade, with somewhat of a "carryover" effect. However, this explanation would be difficult to prove, and is here offered only as a possible factor affecting the results. It does not attempt to explain the ESL scores.

For Eleventh graders, a comparison of the Language Arts means showed no significant differences between treatment groups. Some differences were suggested by the results, with the EPH group showing somewhat higher

values. However there were none which were statistically significant.

In any case, since Language Arts tests deal more concretely, or only, with grammar and structure, it might be suggested that these scores are somewhat less conclusive proof of language acquisition than Reading, which deals with vocabulary and comprehension. It could be argued that the Reading test includes more of those skills on which the Cognitive Academic Language Proficiency relies, while the Language Arts test only includes knowledge about linguistic forms.

At the Twelfth grade level, there were no significant differences in means between groups for Reading, and therefore, it cannot be said that greater or lesser acquisition of the second language was demonstrated. And, although the Language Arts scores did show a significant difference, it was the All Others group, followed by the EPH group, which did best.

It was, nevertheless, only in the Twelfth grade that significant gains were shown, and those were in Language Arts. The ESL group in that grade level showed the most gain, as they also did in the Reading, although these were not statistically significant.

Perhaps more intriguing, in terms of implications for the structuring of programs for LEP students, are the correlations seen in this sample between Completion of

Studies and participation in treatment groups. In the cross-tabulations of Graduate Status Correlated with Treatment Group, and with Years of Help, the EPH group was shown to have a statistically significant association with completion of studies. The cross-tabulations of Graduate Status Correlated with Sequence (of Treatment Group) approached significance, with the EPH groups having somewhat higher percentages of students completing high school studies.

These correlations are especially important in light of the staggeringly high drop-out rate for minority students. As was pointed out in the literature review, the National Coalition of Advocates for Students, in its 1985 Board of Inquiry Report indicated that, nationwide, one in four ninth-grade students drops out of school, and forty-five percent of Mexican-American and Puerto Rican students never finish high school, as compared to seventeen percent of Anglo students. (Lefkowitz, 1986, p.4)

Statistical data from the California State Department of Education in 1982 (Ochoa, 1984), show that only 69% of the 55,000 Chicano-Latino Ninth graders, who enrolled in 1979, graduated. This indicates a California drop-out rate of 31% which is only marginally better than the national rate quoted by Lefkowitz. In numbers, the report from the California State Department of Education, cited above by Ochoa, showed that more than 46,000 Chica-

no-Latino high school students dropped out of school from 1979 to 1981.

The approximately 31% drop-out rate of Hispanic students from the target school in the study, is very close to that of the state. On the other hand, the approximately 2.7% drop-out rate among students in the EPH classes of the study, definitely suggests that administrators of programs for LEP students should examine the possible factors contributing to this result.

It could be argued that, although treatment group seems to be strongly correlated with completion of studies for the LEP Hispanic students in this case study, these results might be due to a "Hawthorne Effect" or to the self-selection of students who were initially more motivated to complete their studies. Self-selection was not necessarily found to be the case, and the existence of a "Hawthorne Effect" can also be contested.

As was found in the interviews, students did not necessarily self-select participation in the class. They were placed because of language background and if space or schedule warranted it. Although an elective, it was not necessarily "elected" by the students.

Since students did not, except in a few instances, participate all three years in an EPH class, a "Hawthorne Effect" may not have exerted an influence, except to the extent that students might have felt comfortable with the

class. They might also have felt "special" if they had been "picked" to participate in the class, which could carry over into other years in other classes.

It is suggested that a more appropriate explanation might be the idea of "student empowerment" that was discussed in the literature review. Validation, by means of both class and classroom atmosphere, was here given to the culture and language of the home. This, in turn, may have produced the positive effect on minority group members of "not being alienated from their own cultural values" (Cummins, 1986, p.22).

The fact that the class was offered could also have helped to counteract the discrimination that "pushes students out of school". Lefkowitz (1985) argues that this form of discrimination operates because schools rarely offer programs that "enable Hispanic students to gain a full command of English while helping them to retain or acquire literacy in Spanish"(p.4). In that way, also, the class could have served to counter what Ogbu and Matute-Bianchi (1986) refer to as student "survival strategies" which do not value academic success. These strategies are often used by students from "caste-like minorities", including some Hispanics (Ogbu and Matute-Bianchi).

These factors were important, but so was the fact that it seems to have been clear to the students that

teachers really cared, and, even in the midst of great change and uncertainty, provided stability. Over and over, analysts in the reports on high risk students emphasize the importance of having students feel someone cares about them and is interested in their progress.

Summary

For students in this case study, the Tenth grade is the most crucial year for treatment to be effective to produce achievement gains, and to encourage students to complete their high school studies. And for this sample at least, the most effective treatment at this grade level seems to be Español Para Hispanos, as defined in this study. Both the achievement results and the drop-out rate among students in the EPH treatment group bear this out.

Along with the stability offered by the faculty who demonstrated their concern for students, the "empowerment" of students which Cummins advocates was here also encouraged by the validation given to the home language and culture of the students in the class. Further research is certainly indicated to see if the results seen here were due to the treatment or to other conditions and factors operant in the study, such as the teacher attitudes, classroom atmosphere, and community support.

Recommendations

Further Study

Because of the kinds of reactions expressed by participants in this case study, and the results of the statistical tests, intensive ethnographic studies with regard to the setting, and the linguistic and cultural factors which affect the achievement and completion of studies for LEP students at the secondary school level are certainly indicated. Additionally, studies based on different language populations would be suggested in order to further explore the basic premise of linguistic interdependence among older second language acquirers which was considered here.

For another study, tighter control of the sample than was possible in this case study would be desirable. In addition, a careful delineation beforehand of the parameters of the treatments would be in order in setting up another study.

Programmatic

The results of this study do suggest that primary language arts instruction should be seriously considered for secondary age LEP students. The continued development

of the primary language at the secondary level was here shown to have a positive effect on LEP student performance in English. Thus, a recommendation would be that administrators include opportunities for LEP students to continue to develop their primary language as part of the secondary school curriculum.

It can also be argued that the EPH treatment should be started even earlier, in junior high school, since it yielded good results in Tenth grade. The results in Eleventh and Twelfth grade likewise indicate that continued instruction in primary language arts in the higher grades can be effective, and should be considered. It was here shown that several years are better than one.

Perhaps the strongest recommendation for secondary school administration that was indicated by this study, is that the type of assistance that has been shown here to be effective in helping to keep students in school should be provided more extensively. Moreover, it should be provided as soon as possible in the student's secondary school career in order to achieve maximum benefit. A program that has been shown to work should be encouraged.

This case study also suggests that administrators should strive to develop a sensitivity to the many policy, attitudinal, community, and cultural factors impinging on student and staff performance, and to take these into account in their planning. The study certainly reinfor-

ces the concept that careful planning, consistency, and stability are essential for all programs.

Those who teach, and those who are charged with the administration of programs, must set up conditions which enable students to develop to fullest advantage their own abilities, talents, and ambitions. Certainly, a program that recognizes, respects, and encourages the language and cultural values each student brings to the learning situation, can only serve to promote individual success and enrichment for both the minority and majority school population.

Such a program cannot exist in a vacuum. In order to survive and be successful, it requires effective community involvement, strong administrative support, innovative leadership, and creative, dedicated teachers.

Above all, it requires a real commitment to "empower" students to take an active part in the preparation for their own future through the respect and encouragement of their own linguistic and cultural strengths. But it is with just such a holistic approach that the educational process for language minority students, as well as all others, can eventually, and truly, become the "action and reflection of men upon their world in order to transform it." (Freire, 1970, p. 66)

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APPENDIX A

STUDENT QUESTIONNAIRE

Name (optional) _____ School _____

Grade _____ Birthdate _____ Birthplace _____

School last attended _____

Please check (✓) the answer that applies:

1. How long have you been in the United States?

<input type="checkbox"/> less than one year	<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-5 years
<input type="checkbox"/> 6-10 years	<input type="checkbox"/> over 10 years	<input type="checkbox"/> born in U.S.

2. If born in another country, how many years were you in school there?

<input type="checkbox"/> less than 1 year	<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-5 years
<input type="checkbox"/> 6-8 years	<input type="checkbox"/> over 8 years	

3. In this country, how long have you been in a bilingual program? Where? _____

<input type="checkbox"/> not in bilingual class	<input type="checkbox"/> less than 1 year
<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-5 years <input type="checkbox"/> over 5 years

4. In this country, how long have you been in an ESL class? Where? _____

<input type="checkbox"/> not in ESL	<input type="checkbox"/> less than 1 year
<input type="checkbox"/> 1-2 years	<input type="checkbox"/> 3-5 years <input type="checkbox"/> over 5 years

5. In this country, how long have you been in an EPH class? Where? _____

<input type="checkbox"/> less than 1 semester	<input type="checkbox"/> 1-2 semesters	<input type="checkbox"/> 1-2 years
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6. The reason I'm taking Español Para Hispanos is:

<input type="checkbox"/> My parents wanted me to
<input type="checkbox"/> My parents don't want me to forget Spanish
<input type="checkbox"/> I don't want to forget Spanish
<input type="checkbox"/> This class helps me with my other classes
<input type="checkbox"/> This class helps me learn English
<input type="checkbox"/> It fit into my schedule
<input type="checkbox"/> I needed an elective
<input type="checkbox"/> I think it is valuable to know more than one language
<input type="checkbox"/> My counselor signed me up for this class

APPENDIX B

TEACHER INTERVIEW

EPH levels taught _____ Native Spanish speaker? _____

Years of teaching experience _____ Years of teaching EPH _____

College major _____ Minor _____

Highest degree earned _____ Credential _____

1. Did you volunteer or were you asked to teach EPH? _____

2. Is EPH taken by all students in the bilingual program? _____
Why or why not?3. Does your school have a bilingual department? ____ Yes ____ No
How is it organized?

4. How is your course organized?

____ grammar, composition, literature

____ grammar, composition

____ composition, literature

____ grammar, literature

____ oral language arts, written language arts (grammar,
composition, literature, speech, etc.)

____ comparative grammar and literature (with English)

____ other: _____

5. How are students chosen to participate?

____ elective ____ counselor decision to program them in

____ must have my permission to enroll in course

6. What are the prerequisites for this course?

Teacher Interview - p. 2

7. Do your students regularly take the Advanced Placement examination in Spanish?_____ Why or why not?

8. Does this course carry credit towards college preparation?_____
What designation does U.C. give?

___ Spanish I ___ Spanish II ___ Spanish III ___ Spanish IV
___ Spanish V ___ Other:_____

9. Do you feel that you have the support of your colleagues for this class?

___ Principal ___ Counselors ___ Other language teachers
___ Other teachers in school ___ Central District Office
___ Central Office of Bilingual Education

10. What are the texts used for this class?

11. What changes would you recommend for the class or the program?

Name_____ School_____

APPENDIX C

COUNSELOR INTERVIEW

1. How are students selected for participation in the Espanol Para Hispanos class?
2. Do all students who request EPH get in? ☐ Yes ☐ No
Why or why not?
3. What criteria are used to screen participants?

What tests are given?

Is teacher approval needed to have student enroll in EPH?

4. If a student does not request EPH, is he or she counseled in?
5. If a student does not want to take EPH, but his parents want him to take it, what do you counsel?
6. If there are too many students requesting EPH for the available space, which students get preference?
7. In your personal opinion, is EPH
☐ helpful to the student in a bilingual program
☐ helpful to a student not otherwise in a bilingual program
☐ okay if the student wants it
☐ unnecessary since the student already knows Spanish
☐ a waste of time; the student should take college prep work instead
☐ great for students in college prep courses

Counselor name _____ School _____

APPENDIX D

PARENT INTERVIEW

1. Are you acquainted with your child's present program of studies?
2. In what ways do you encourage his/her taking particular subjects or courses?
3. Do you feel it is important for your child to study Spanish in school? _____ Why or why not?
4. If he/she weren't taking EPH, would you prefer he/she take some other subject? _____ Why?
5. Do you feel that your child's English has improved this year? _____ To what do you attribute this?
6. Are you a member of the parent advisory group for your child's school?
7. Have you taken part in any of the parent advisory group activities this year?
8. In general, how do you feel about the bilingual program your child is in?
9. In what ways do you think it could be improved?

Student Name _____ Grade _____ School _____

Parent Name _____

Form For Recording Student Data

STUDENT NAME	I.D.	SEX	CLASS SEQ.			1980 - 81			1981 - 82			1982 - 83			1983 - 84			1984 - 85			TCHR. SEQ.		
			10	11	12	GRP	PRE	POST	GRP	PRE	POST	GRP	PRE	POST	GRP	PRE	POST	GRP	PRE	POST	10	11	12
	0000 1234	0 7	1 0	1 2	1 4	1 7	122 001	222 345	2 8	333 012	333 456	3 9	444 123	444 567	5 0	555 234	555 678	6 1	666 345	66777 78901	7 4	7 6	7 8
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APPENDIX E