

A STUDY USING A STRUCTURED AUDIO-LINGUAL APPROACH TO THE
TEACHING OF ENGLISH TO SPANISH-SPEAKING KINDERGARTEN
PUPILS IN TWO ELEMENTARY SCHOOLS

A Dissertation
Presented to
the Faculty of the College of Education
University of Houston

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

by
Clyde Thomas Blackman
August 1968

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ABSTRACT

Purpose of the study. The purpose of this study was to determine if the Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners was a more effective method of teaching Spanish-speaking kindergartners than the regular language program in two elementary schools.

Procedures and source of data. A sample of 133 kindergartners from a population of 251 eligible kindergartners in Anson Jones and Sidney Sherman Elementary School were assigned randomly to the four kindergarten teachers. They were further assigned to eight pilot and eight control groups for language instruction. They were instructed for thirty minutes per day for 110 days by a language development teacher outside of their regular classroom. The pilot groups were instructed using the Audio-Lingual Approach to Language Development for Spanish-Speaking Kindergartners. The control groups were instructed in the Houston Independent School District's language program for kindergarten children. The Kindergarten Evaluation of Learning Potential was taught to the

children and they were evaluated by their regular classroom teacher. The mean variances of Associative, Conceptual, Creative Self-Direction, and combined Total Scores between the pilot and control groups were submitted to the t test to determine significant differences in learning levels.

Conclusions. The results of the study are the basis for these conclusions:

1. Spanish-speaking children of the lower socioeconomic level, with smaller numbers of non-English speakers in their group, who have been instructed in the Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners, have better Associative Learning, as tested by the Kindergarten Evaluation of Learning Potential than those who have been instructed by the regular kindergarten language instructional program.
2. Spanish-speaking children of the lower socioeconomic level, with many non-English speakers in their group who have been instructed in the regular kindergarten language instructional program achieve on higher levels of Creative Self-Direction as tested by the Kindergarten Evaluation of Learning Potential when compared to those who have been instructed in Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners.

3. Spanish-speaking older kindergartners who have large numbers of non-English speakers in their groups, when instructed by the Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners, achieve at higher levels of Associative Learning, as tested by the Kindergarten Evaluation of Learning Potential, than those who have been instructed in the regular kindergarten language instructional program.

Recommendations. The following recommendations are based on the findings of this study:

1. The Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners should be continued for a longer period of time.
2. The study should be replicated and evaluated by more than one instrument.
3. The Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners should become a teaching strategy by the regular classroom teacher.

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CHAPTER I

OVERVIEW OF THE STUDY

I. BACKGROUND OF THE STUDY

Rapidly expanding developments in science and technology have demanded dramatic change in the quality and quantity of education in order to better utilize manpower. The State of Texas recognized this need for new dimensions in education when the Legislature and Governor John Connally created the Governor's Committee on Education Beyond the High School on April 9, 1963. When this committee explored the educational level of the labor force it found that of every one hundred third graders in 1953 only fifty-four were high school graduates in 1963.¹ These forty-six school leavers represented an economically unproductive segment of the citizenry because of limited academic and labor skills. These persons would find it difficult to lead personally satisfying lives and add to the wealth of the State of Texas in this technological age that requires quality education to meet the accelerating economy.

¹ Governor's Committee on Education Beyond the High School, Education: Texas' Resource for Tomorrow, A Report Prepared by the Governor's Committee on Education Beyond the High School (Austin: August 31, 1964), p. 8.

If education was to be effective in appropriately utilizing manpower it was necessary to identify these school leavers and plan instructional programs to develop their educational potential. This school leaver, however, was difficult to isolate and study because of the nature of school record maintenance. Browning and McLemore approached this problem by studying the 1960 Census and reporting median school years completed for the three major ethnic groups of Texas.² Their 1964 report indicated that the 1960 median school years attained by the three major ethnic groups were as follows: Anglo 11.4 years, nonwhite 8.1 years, and Spanish-surname population 6.1 years. Further delineation showed enrollment by ethnic groups was similar in the five-fifteen year old category but was much more diverse in the sixteen-nineteen year old range.³ Mandatory state school attendance laws apparently kept children of the three ethnic groups enrolled until the age of sixteen. A study of the sixteen-nineteen year old groups revealed that 64.3 percent of Anglo, 57.6 percent of nonwhites, and only 46.2 percent of the Spanish-surname population were enrolled at these age levels. Although the Spanish-surname population was equally represented with the

²Harley L. Browning and S. Dale McLemore, A Statistical Profile of the Spanish-Surname Population of Texas (Austin: Bureau of Business Research, 1964), p. 30.

³Ibid., p. 36.

other ethnic groups at the lower educational levels the differential dropout rate at the upper levels placed the Spanish-surname youth at a decided disadvantage in the labor market.

In view of their limited educational attainment it seemed imperative to further evaluate the Spanish-surname population to better meet their needs. Statistical study showed 15 percent of the population of Texas was composed of Spanish-surname citizens.⁴ This population, however, was not equally distributed throughout the state but had high areas of population concentration in a few metropolitan counties.⁵ This was a consistent population pattern over a ten year period as shown by a comparison of the 1950 and 1960 Census.⁶

Of the seven counties with high percentage of Spanish-surname population, Harris County had increased its Spanish-surname population by 91.5 percent between the two Censuses.⁷ Despite this tremendous growth in percentage, the Spanish-surname population represented only seventy-five thousand persons in Harris County. Although this number was relatively small when compared to the total Harris County population, the children of this Spanish-surname population required more schooling than an equal number of other citizenry, according to Browning and McLemore.⁸ Several factors influenced this

⁴ Ibid., p. 11. ⁵ Ibid., p. 13. ⁶ Ibid., p. 15.
⁷ Ibid. ⁸ Ibid., p. 21.

need. The children of the Spanish-surname population were more numerous when compared to an Anglo population of absolute size. Usually, they arrive at school with listening and speaking language skills in Spanish whereas law requires that instruction be conducted in the English language in the public schools of Texas. In the Spanish-surname population educational and cultural limitations of parents restricted their ability to encourage and support their children in educational pursuits. This resulted in a greater variation between the school performance of the Spanish-surname children and the two remaining ethnic groups.⁹ This breach increased feelings of inferiority and further impeded educational attainment among the Spanish-surname pupils. Consequently, children of Spanish-surname population were ill prepared to meet the demands of the instructional program in the public schools.

II. NEED FOR THE STUDY

From this point of resolution evolved the need for some planned program to more nearly equate the educational opportunity for all children and especially, for the Spanish-surname child. Interested persons in the educational field have concerned themselves for many years with the educational needs of the Spanish-surname school population. Sanchez and

⁹Ibid., p. 64.

and Otto in 1946 prepared a bulletin to aid teachers of Spanish speaking children.¹⁰ In their introduction they advised teachers that children faced economic and social differences, but hastened to warn that likenesses were greater than differences when children's needs were involved. They noted that there was a wide range of differences in the amount and quality of English known but this wide range was also true in the mother tongue, Spanish.

Manuel, as early as 1935, emphasized the language problem of the Spanish-surname pupil, linking his low socioeconomic situation to his educational opportunities.¹¹ Rubel, in his study of a border town, said that one of the occurrent changes was the desire of the Mexican-American to acquire the English language and literacy skills.¹² The Mexican-American might not know how to accomplish this but he realized his release from "stoop labor" was closely related to his educational attainment.

¹⁰ George I. Sanchez and Henry J. Otto, A Guide for Teachers of Spanish Speaking Children, State Department of Education Bulletin No. 464 (Austin: State Department of Education, 1946), p. 8.

¹¹ H. T. Manuel, Spanish and English Editions of Stanford-Binet, in Relation to the Abilities of Mexican Children, Bulletin No. 3542 (Austin: University Publications, The University of Texas Press, 1935), p. 38.

¹² Arthur J. Rubel, Across the Tracks: Mexican Americans in a Texas City (Austin: University Publications, The University of Texas Press, 1966), p. 244.

Groups, as well as individuals, have shown concern for the education of persons with a mother tongue other than English. The 1966 Annual Conference of Southwest Council of Foreign Language Teachers committed itself to bilingual instruction.¹³ Participants discussed methods of developing the adequate bilingual. They were adamant that the child begin his school experience in his mother tongue with the second language gradually becoming an effective medium of instruction.

Bereiter and Englemann indicated that the quality of the pupil's mother tongue was important in determining the language of instruction.¹⁴ This point was illustrated in their work with preschool disadvantaged Negro children. They found that the children had adequate social language to express a wide range of emotions. These children had not learned, however, to use language for obtaining and transmitting information, for monitoring their behavior, and for accomplishing verbal reasoning. In fact, they had not mastered the cognitive uses of language which were of primary

¹³ Charles Stubing (ed.), Bilingualism: Reports of Third Annual Conference Southwest Council of Foreign Language Teachers, November 4-5, 1966, Hilton Inn, El Paso, Texas, p. 25. (Mimeographed.)

¹⁴ Carl Bereiter and Siegfried Engelmann, Teaching Disadvantaged Children in the Preschool (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1956), p. 42.

importance in school. Even though the mother tongue of these Negro children was English, their language prevented them from learning adequately without structured language instruction.

Concomitantly, this study was predicated upon the premise that Spanish-surname children from low socioeconomic homes did not have adequate language skills in Spanish to begin instruction in Spanish. Their Spanish served their social needs but was inadequate for cognitive skills to begin the work of formal education.

Spanish-surname citizens who approach the sociological middle class in large metropolitan centers tend to move into the broader community, leaving the lower Spanish-surname socioeconomic segment in small groups where they find others to share their social similarities. Considering the limitations of the lower socioeconomic Spanish-surname population's Spanish and the urgency of the learning task it seemed imperative that instruction begin as soon as possible in English. This instruction began where all normal language learning begins: first, listening and speaking, and then, reading and writing. The language instruction was constructed to emphasize the cognitive skills necessary for conceptualization.

III. DEFINITIONS OF TERMS USED

Since terms were used which could have various interpretations, definitions of these terms are stated to clarify their use in this study.

Audio-lingual approach. Audio-lingual approach was a name applied to the method of teaching language in which the teacher presented auditory patterns of language for the child to emulate verbally.

Spanish-speaking kindergarten pupils. Spanish-speaking kindergarten pupils in this study referred to all kindergarten pupils who were five years of age on or before September 1, 1967, and who had Spanish as their first language.

Spanish-surname population. Spanish-surname population in this study described those persons in the total population who had surnames commonly considered to be derived from Spain and Mexico.

Mother tongue. Mother tongue in this study was the first language learned by a person from those significant persons who cared for him during his dependency period.

IV. STATEMENT OF THE PROBLEM

The purpose of this study was to determine the effectiveness of an audio-lingual approach of English language

instruction with Spanish-speaking kindergarten pupils in two elementary schools. The study explored the following questions:

1. Does there exist a difference in the performance of Sherman and Jones Pilot Groups?
2. Does there exist a difference in the performance of Sherman and Jones Control Groups?
3. Does there exist a difference in the performance of the Morning and Afternoon Control Groups?
4. Does there exist a difference in the performance of the Morning and Afternoon Pilot Groups?
5. Does there exist a difference in the Pilot and Control Groups?

V. LIMITATIONS OF THE STUDY

This study was limited by the following factors:

1. The sample represented only two elementary schools in one metropolitan school district.
2. The researcher served as principal of one of the two elementary schools in this study.
3. The population was not stable over the learning period.
4. The performance of the children was based upon a single instrument, Kindergarten Evaluation of Learning Potential.¹⁵
5. Item number nine of the Kindergarten Evaluation of Learning Potential conflicted with the instructional policy of the Houston Independent School District and had to be omitted.

¹⁵ John A. R. Wilson and Mildred Roebeck, Kindergarten Evaluation of Learning Potential: A Curriculum Approach to Evaluation (New York: McGraw-Hill Book Company, Inc., 1965).

VI. OUTLINE OF PROCEDURES FOR THE STUDY

1. A survey was made of the literature pertinent to the study.
2. Children were assigned randomly to each kindergarten teacher in the two elementary schools and no more than fourteen pupils were assigned to Pilot and Control Groups.
3. A structured audio-lingual curriculum was written to be used with the Pilot Group.
4. Pilot and Control children were instructed by a language development teacher for an equal length of time daily. Pilot children were instructed by the audio-lingual approach and the Control children had their classroom language instruction extended.
5. Pilot children were given audio-lingual instruction. This material was modified as the program progressed to facilitate feedback as children learned.
6. The Kindergarten Evaluation of Learning Potential was taught and evaluated by the regular kindergarten teacher according to directions with exception of item number nine which conflicted with instructional policies of the Houston Independent School District.
7. Student's t test of means was used to determine if the difference in performance between the groups was significant at the .05 level of confidence.
8. Computations were made by hand.
9. Results were interpreted and discussed.

VII. SUMMARY

Education has become a crucial issue for the citizenry of the State of Texas and of the United States of America.

The education of the Spanish-surname population of Texas continues to be a vital concern for the educator.

Approaches to this concern vary. State law requires all, except foreign language, instruction to be conducted in English. Foreign language teachers of the Southwest suggest that all children begin their instruction in their mother tongue.

Some research indicated that the quality of the mother tongue should be a factor in the language of school instruction. The structure of social language often does not include cognitive skills necessary for conceptualization in school subjects.

The purpose of this study was to test whether a structured audio-lingual approach to teaching English to kindergarten children who had a mother tongue of Spanish was more productive than the regular classroom language program.

The sample was taken from the total Spanish-surname population of two elementary schools' kindergartens. The younger children were assigned to the morning classes while the older children were assigned to the afternoon classes. The population was randomly assigned to the two kindergarten teachers in each of two elementary schools. Each teacher's children were assigned to either a Pilot or Control Group.

The children were taught for an equal length of time, daily, by a language development teacher using either the

audio-lingual approach or an extension of the regular classroom language program. All subjects were taught and evaluated by their regular kindergarten teacher in their respective classroom. The instrument used was the Kindergarten Evaluation of Learning Potential. The statistic, Student's t test, was used to determine if there was significant difference in groups.

CHAPTER II

REVIEW OF THE LITERATURE

The democratic revolution that was the founding and expansion of the United States attempted to repair historical inequities by offering education to the masses of people, without regard to family position or wealth. A major promise of this new society, born of a literal belief in the equality of mankind, was the attempt to make education and schools the chief agent of social mobility, a means of self-improvement available to all. An important part of the American dream was that the low social or economic status of parents would not be a serious barrier to the education of any child.

I. EDUCATIONAL STATUS IN THE UNITED STATES

A review of the literature indicated that within the past two decades a number of observers have become concerned with the increasing indications that the American public educational system, more elaborate than ever, had paradoxically become less effective as an instrument of social mobility. The significance of this issue has become even more vital in view of rapidly expanding developments in science and technology which have demanded change in the quality and quantity

of education to better utilize manpower of all social classes.

Estes expressed the view that the launching of Russia's Sputnik and the civil rights movements of the 1950's triggered this new and dynamic force for change. Events such as these, according to Estes, fostered research that found one million pupils quit school annually in the United States and one out of three scholastics left school prior to completing the twelfth grade. He further reported that unemployed individuals with an eighth grade education or less were four times the national average and jobs filled by high school graduates rose by 40 percent in the past ten years but jobs for those with less schooling decreased nearly 10 percent in the same period.¹

Manuel quoted a study of national high school dropouts that showed one in every three ninth graders failed to finish high school and that school attainment was closely related to job level. Persons without a high school diploma were at a disadvantage in periods of high unemployment and juvenile

¹Nolan Estes, "Innovations in Federal Assistance to Education," Proceedings, Dwain M. Estes and David W. Darling, editors. Texas Conference for the Mexican-American: Improving Educational Opportunities, San Antonio, Texas, April 13-15, 1967 (Austin: Southwest Educational Development Laboratory, 1968), p. 10. As there are numerous authors cited in this chapter from this Conference, hereinafter only the author's name, article title, Proceedings, and page number will be given.

delinquency was ten times more frequent among dropouts than among high school graduates. School attainment was not only closely associated with level of employment but with acceptable social patterns.

Manuel observed that a person who lacked education lost a vital part of life and in this loss of human capacity, society lost a part of its most valued resource. If, in addition, the person became antisocial, the loss was not only a failure to receive the positive contribution which he might have made, but this was also a subtraction from the common welfare.²

Such statistics intensified the need to identify school leavers, determine reasons for their withdrawal from school, and plan instructional programs to develop their educational potential. A review of the literature showed this had been approached in various ways.

Sexton linked the education attained by a child with his family's income. She observed that children from urban slums could not compete with children of higher social class. This was not necessarily because of any deficiency of talent or ability, but because society was dominated by the more

²Herschel T. Manuel, Spanish-Speaking Children of the Southwest: Their Education and Public Welfare (Austin: The University of Texas Press, 1965), p. 5.

culturally and financially endowed and thus schools were influenced to provide more superior educational services for this group.³

Academic success correlated significantly with the socioeconomic status of the parents according to Leighbody. He reported children of lower socioeconomic backgrounds tended to do less well scholastically.⁴

Sexton observed that children tended to be cast in the image of their parents, assimilating their morals, attitudes, and values. A child whose father was an unskilled worker would, in all probability, become an unskilled worker himself. She concluded that the position a family occupied in society had a strong influence on the child's school achievement and his ultimate success in life.⁵

Edmondson expressed a similar view in stating an organized system of family life was capable of subtlety transmitting its attitudes for generations. He emphasized the

³Patricia C. Sexton, Education and Income: Inequalities of Opportunity in Our Public Schools (New York: Compass Books Edition, 1964), p. 10.

⁴Gerald B. Leighbody, "Impact of Area Vocational Schools," Educational Leadership, 25:7:661, April, 1968.

⁵Sexton, op. cit., pp. 11-12.

importance of this in considering problems of intercultural education, because of the differences in family traditions.⁶

II. EDUCATIONAL STATUS OF THE SPANISH-SURNAME POPULATION IN TEXAS

According to the Office of Economic Opportunity the poor made up 15 percent of the population of the United States. Negroes were not the major component of this group. Two out of every three poor Americans were white. Nearly one-half of the poor were twenty-one years or younger.⁷

Gonzales reported that only one-sixth of the population of the United States lived in the five states of the Southwest. He emphasized, however, that one out of every four persons in these five states was of a low socioeconomic level.⁸

Bernal cited a study of Robert Lampman in which the correlation was .67 between low income and low level of education attached. He added that the Spanish-surname population

⁶ Munro S. Edmondson, "Family Structure in the Latin American and Negro American Communities," Education and Social Change: Monograph I, John B. Orr and Lydia Pulsipher, editors (Austin: Southwest Educational Development Laboratory, 1967), p. 45.

⁷ "A Nation Within a Nation," Time, 91:20:29, May 17, 1968.

⁸ Henry B. Gonzales, "The Hope and the Promise," Proceedings, pp. 112-22.

of the Southwest were possessors of both low income and low educational achievement.⁹

Gonzales described more than one-half of the persons in sixty-three counties as "poor" in 1960. He identified a significant proportion of these "poor" as having Spanish-surnames.¹⁰

According to Upham and Wright the incidence of poverty among both Spanish-surname and nonwhite families in Texas was approximately two and one-half times greater than for Anglo-white families. The poverty differentials were even greater for urban families in that both minority groups were experiencing poverty rates three times as great as urban families of the majority group.

These authors observed moderate levels of poverty in counties that included large metropolitan areas with populations in excess of 50,000. Although most counties with extreme levels of poverty were in South Texas, the urban areas had the greatest number of Spanish-surname population with low incomes since 80.2 percent of these families resided in metropolitan counties in 1960.¹¹

⁹ Joe J. Bernal, "Introduction," Proceedings, pp. 1-9.

¹⁰ Gonzales, Proceedings, op. cit., p. 113.

¹¹ W. Kennedy Upham and David E. Wright, Poverty Among Spanish Americans in Texas: Low Income Families in a Minority Group (Departmental Information Report 66-2; College Station: Texas A&M University, 1966), pp. 14-28.

According to Senator Ralph W. Yarborough a report published by Texas A&M University in September, 1966, revealed more than 50 percent of Spanish-surname families in Texas had annual incomes below \$3,000. At least 29.9 percent had annual incomes below \$2,000 as compared to only 15.4 percent of the state's total white population.¹²

Family size was recognized as a factor in considering the economic plight of the Spanish-surname population. In comparison with other national groups, only small Indian populations on reservations in the western states had higher fertility rates than the Spanish-surname population.¹³ In Texas the median Spanish-surname family size was 4.6 persons as compared to 3.4 persons for nonwhite families and 3.2 persons for Anglo families.¹⁴

Senator Yarborough expressed the view that the poverty level of the Spanish-surname population vitally influenced data showing Texas ranked thirty-second in education and thirty-fourth in the average daily income of the people of the nation.¹⁵

¹²Ralph W. Yarborough, "Bilingual Education and Human Development," Proceedings, pp. 123-27.

¹³Harley L. Browning and S. Dale McLemore, A Statistical Profile of the Spanish-Surname Population of Texas (Austin: Bureau of Business Research, 1964), p. 26.

¹⁴Upham and Wright, op. cit., p. 23.

¹⁵Yarborough, Proceedings, op. cit., p. 126.

Lamanna and Samora stressed that not only socioeconomic level influenced school attainment but the residential location of the pupil and the nativity of parentage affected his educational status. They reported urban residents attained a higher educational level than rural ones, regardless of sex, age, and nativity of parentage.

Nativity of parentage, however, was also associated with the amount of education completed. The foreign born had less education than the natives of native parentage. The native born were generally closer to one another in educational level than the foreign-born group.¹⁶

According to these authors two of every five of the almost 3.5 million Spanish-surname persons in the five Southwestern states resided in Texas. These 1.4 million Texas Spanish-surname citizens represented almost 15 percent of the total Texas population and over 20 percent of the school age population ranging from five to nineteen years. They noted while the median school years completed by Spanish-surname adults increased significantly between 1950 and 1960 from 3.6 to 4.8, their educational level remained extremely low in comparison to other ethnic groups. Almost one-half of the Spanish-surname population in Texas was essentially functionally

¹⁶ Richard A. Lamanna and Julian Samora, "Recent Trends in Educational Status of Mexican-Americans in Texas," Proceedings, pp. 20-25.

illiterate in that this group had less than four years of formal education.¹⁷

In studying the 1960 Census Maglietto found thirty-one counties in Texas had an enrollment of 50 percent or more Spanish-surname pupils. Eight counties reported more than 75 percent and Kennedy County had 100 percent Spanish-surname school enrollment. According to Maglietto:

. . . This represents about one of every six pupils enrolled in the Texas public schools during 1955-56 school year as being non-English speaking. The drop-out rate of Spanish speakers is four times¹⁸ as great as that of the school population as a whole.

Browning and McLemore reported the 1960 median school years attained by the three major ethnic groups of Texas were: Anglo 11.4 years, nonwhite 8.1 years, and Spanish-surname population 6.1 years. Enrollment by ethnic groups was similar in the five-fifteen year old category but was much more diverse in the sixteen-nineteen year old range. Mandatory state school attendance laws kept children of the three ethnic groups enrolled until the age of sixteen. A study of the sixteen-nineteen year old groups indicated that 64.3 percent of Anglo, 57.6 percent of nonwhites, and only 46.2 percent of the Spanish-surname population were enrolled at these age levels.

¹⁷

¹⁸ Ibid., pp. 20-21.

¹⁸ Sister Lois B. Maglietto, "Where Are They? How Are They Educated?: Teaching the Non-English Speaking Children in our Public Schools," January, 1964, p. 2. (Mimeographed.)

Although the Spanish-surname population was equally represented with the other ethnic groups at the lower educational levels the differential dropout rate at the upper levels placed the Spanish-surname youth at a decided disadvantage in the labor market.¹⁹

In exploring the educational status of the Spanish-surname population more extensively, Browning and McLemore reported that of the three major ethnic groups in Texas, the Spanish-surname population had the most unfavored educational experience. Particular attention was directed to those who had no formal education. Among persons who were twenty-five years of age and older in 1960, only 1.1 percent of the Anglo group and 5.4 percent of the nonwhite population had no formal education. In contrast 22.9 percent of the Spanish-surname group had none. This was of particular interest in that the Spanish-surname appeared between the nonwhite and Anglo populations in most other respects.²⁰

Another pattern of interest delineated in the study of Browning and McLemore was the improvement at different educational levels of those within each ethnic group for each census period. The proportions of those having no education at

¹⁹ Browning and McLemore, op. cit., pp. 30-36.

²⁰ Ibid., p. 30.

all or only an elementary school education had declined for all three groups, while proportions of those having high school or college education had increased. These shifts toward higher educational levels were reflected in the increase in median years of school completed for each group. A decrease among those having no education or only elementary school education and an increase among those having high school or college education was most pronounced for the nonwhite and the Spanish-surname groups. Despite this, the authors concluded that the Spanish-surname population still lagged significantly when its global educational status was compared to the other two ethnic groups in Texas.²¹

III. CULTURAL CONSIDERATIONS IN IMPROVING THE EDUCATIONAL STATUS OF THE SPANISH- SURNAME POPULATION IN TEXAS

A review of the literature revealed the Spanish-surname population in Texas had a high incidence of poverty as well as larger families and a greater school dropout rate than the other two major ethnic groups in the state. It was apparent, therefore, this group was poorly equipped to face the challenge of a society oriented to high level skills and advanced education. Persons who were concerned with this problem concurred

²¹Ibid., pp. 29-30.

that a more effective educational program was needed to ameliorate socioeconomic differences.

A report prepared by the Governor's Committee on Education Beyond the High School recognized that a more appropriate educational mode must be found if the Spanish-surname population was to become more economically productive.²²

In Hearings before the Inter-Agency Committee on Mexican American Affairs, Ramirez stressed that the Spanish-surname youth suffered from multiple handicaps in seeking employment. These included inadequate educational background, negative familial and environmental atmosphere, and inadequate socialization to the value system of the larger society.²³

Bernal stated that regardless of the descriptive term applied to this ethnic group there was a great need to create more equal educational opportunities for them.²⁴

Upham and Wright expressed the view that no real progress was probable for this group unless a way could be found to raise its educational levels.²⁵

²² Governor's Committee on Education Beyond the High School, Education: Texas' Resource for Tomorrow (Austin: Bureau of Business Research, 1964), p. 12.

²³ Salvador Ramirez, "Employment Problems of Mexican-American Youth," The Mexican American: A New Focus on Opportunity, Inter-Agency, editor (Washington: Inter-Agency Committee on Mexican American Affairs, 1967), p. 75.

²⁴ Bernal, Proceedings, op. cit., p. 2.

²⁵ Upham and Wright, op. cit., p. 37.

Authorities agreed that the educational requirements for the poverty level Spanish-surname group were greater than those for a comparable Anglo population. The combined effects of social and economic deprivation together with a bilingual and bicultural background were factors that limited their school achievement.

Absell defined culturally deprived children as those who suffered from a poverty of appropriate experience. Although their lives may have included various experiences these were not of a type to equip them for a life in an urban, primarily middle-class work assignment aligned with desks, time clocks, and machines.²⁶

Riessman observed that the underprivileged was interested in education in terms of its usefulness for him. He was more oriented to the vocational rather than the academic aspects of education.²⁷ According to the author there were both positive and negative factors to enable the underprivileged to gain an education that would help him better cope with the everyday problems of a complex society.

. . . liabilities are . . . narrowness of traditionalism, pragmatism, and anti-intellectualism; limited development of individualism, self-expression,

²⁶ Bernard Absell, "Not Like Other Children," reprinted from Red Book Magazine, October, 1963.

²⁷ Frank Riessman, The Culturally Deprived Child (New York: Harper and Row, 1962), p. 13.

and creativity; frustrations of alienation; political apathy; suggestibility and naivete; boring occupational tasks; broken, overcrowded homes. . . . assets are . . . the cooperativeness and mutual aid that mark the extended family; avoidance of the strain accompanying competitiveness and individualism; equalitarianism, informality, and the children's enjoyment of each other's company, and lessened sibling rivalry; the security found in the extended family and in a traditional outlook.²⁸

According to Wheeler culturally deprived children were academically disadvantaged because they received little cultural support from home. Limited verbal and reading skills in school reinforced this deficit. As a result of this limitation they were usually assigned to a "track" system upon the basis of their intelligence test performance. This resulted in internal segregation for them because, according to Wheeler, intelligence test results reflected conditions of one's cultural origins rather than innate intellectual ability.²⁹

Ulibarri found that members of poverty cultures had lower life expectation, lower levels of physical and mental health, and lower levels of physical stamina than members of the more affluent society. He noted that more specifically the poverty level Spanish-surname population had a value system that was in conflict with demands of the labor market. Lack of competition, timidity, present-time orientation, and

²⁸ Ibid., p. 48.

²⁹ Harvey Wheeler, "A Moral Equivalent for Roots," Saturday Review, May 11, 1968, p. 21.

low levels of aspiration were cited as factors which precluded socioeconomic improvement.³⁰

Wilson discussed these values in relation to the educative process. Poverty level Spanish-surname children entered school embracing the value of cooperation rather than competition, with leisure-time rather than compulsive-time orientation, and an emphasis on the worth of the individual rather than the acquisition of knowledge to enhance the individual's worth. They valued mystery and magic rather than the scientific process. The concepts of making speculations and decisions, selecting from various alternatives and testing were alien to most of these children.³¹

Edmondson reported that the influence of the family was a most vital factor in developing an individual's pattern of values. He observed that initially the English and Spanish families appeared to be cognate. A more extensive comparison, however, showed significant differences. For example, Spanish relatives by marriage were considered to be definitely not a part of the family while Anglo in-laws were given some kinship.

³⁰ Horacio Ulibarri, Educational Needs of the Mexican-American, ERIC Clearing House on Rural Education and Small Schools (Las Cruces: New Mexico State University, March, 1968), pp. 3-15.

³¹ Herbert B. Wilson, Evaluation of the Influence of Educational Programs on Mexican-Americans, ERIC Clearing House on Rural Education and Small Schools (Las Cruces: New Mexico State University, March, 1968), p. 4.

In Spanish families the patrilineage was of great importance. Recent data suggested that Spanish-surname families may have divergent patterns, particularly in the metropolitan slums. Even when weakened by poverty or acculturation, however, the Spanish-surname family has continued to be a powerful instrument in conveying attitudes and values.³² Edmondson was of the opinion that these family patterns have been transmitted for generations because they held great meaning for these people.

. . . To see the world through Spanish eyes means to see it familistically with the peculiar blend of Spanish arrogance, humility, and democracy. And it means to hate and fear the attitudes which threaten these values.³³

Madsen described three levels of acculturation among the Texas Spanish-surname population that frequently represented a three-generation process. The base line was the traditional folk culture derived from Mexico but modified by its Texas setting. Although influenced by technological and economic factors, the Mexican-American folk society has retained the core values of Mexican folk culture. He delineated the second level of acculturation as involving persons who were caught in the value conflict between two cultures. In attempting to make the transition from Mexican-American folk culture to that of the dominant society they encountered

³² Edmondson, op. cit., pp. 45-52.

³³ Ibid., p. 53.

strong anxieties about individual identity and community affiliation. The third level of acculturation embraced Spanish-surname persons who achieved status in the English-speaking world. Madsen further correlated the three acculturative levels with class structure and noted that successful acculturation generally was a middle- or upper-class phenomenon.³⁴

According to Madsen the poverty level Spanish-surname Texan considered himself to be both a United States citizen and a member of La Raza (The Race), a term which referred to this group who were united by cultural and spiritual bonds derived from God. Regional variations in behavior were recognized but the spirit was assumed to be divine and infinite. Suffering by the lower class particularly has been made acceptable by a strong belief in such fatalism. This fatalistic philosophy produced an attitude of resignation so that what the Anglo tried to overcome, the poverty level Spanish-surname regarded as fate. Many of the low income Spanish-surname population had the philosophy that God rather than man controlled events, which emphasized living for the present in its fullest.³⁵ This discouraged planning for the future since God was in control. The family, based on a concept of

³⁴ William Madsen, The Mexican-Americans of South Texas (New York: Holt, Rinehart and Winston, Inc., 1965), pp. 2-3.

³⁵ Ibid., pp. 15-17.

male superiority, has been a valued institution in the Spanish-surname society. The individual owed his primary loyalties to the family which was a major source of affective relationships.

The poverty level Spanish-surname individual regarded envy as destructive, an attitude which acted as a barrier to material advancement. He also feared the greed, dishonesty, and treachery of others which fostered an attitude of suspicion. This encouraged the value of social distance.³⁶

Madsen emphasized that the low income Spanish-surname group clung to these cultural patterns and avoided unnecessary contacts with Anglos who would be regarded as threatening and incomprehensible. For this culture, formal schooling has been unimportant except for learning enough English to defend one's self when necessary in the Anglo community.³⁷

Parental indifference toward formal schooling was reflected in the poor academic performance of pupils in this group. Children scorned competitive scholastic endeavor because it would be an attempt to degrade fellow students.

Madsen summarized that the Spanish-surname child from the lower socioeconomic family has found school to be a confusing and frequently hostile environment. Values were stressed

³⁶Ibid., pp. 17-23. ³⁷Ibid., p. 31.

that conflicted with his culture and he was urged to behave in a way that was foreign and uncomfortable to him.³⁸

Manuel reported Spanish-surname children had many more educational difficulties to surmount than Anglo children. He described the division of the community into contrasting groups as one major problem source. Division of the populace into English-speaking and Spanish-speaking groups limited understanding and promoted hostility. This made it difficult for a community to plan an adequate educational program and created problems within the school itself.

A second source of difficulty, according to Manuel, originated in cultural differences, which discouraged free association and thus perpetuated the isolation of one group from the other. This prevented the Spanish-surname child from becoming a full member of the community. Frequently, he was caught between his parental group and the remainder of the community which resulted in partial rejection by both groups.³⁹

Upham and Wright noted that cultural factors created greater obstacles for helping the Spanish-surname group than for Anglo or nonwhite groups. He cited specifically the avoidance of the Spanish-surname population in the usual formal

³⁸ Ibid., pp. 97-107.

³⁹ Manuel, op. cit., p. 7.

or voluntary organizations as an impeding factor in modifying their poverty status.⁴⁰

According to Gonzales eradicating the general cultural pattern of the Spanish-surname society in an attempt to improve its status would not only be unjust but would be impossible.⁴¹

Gaarder agreed when he stated the following at the Third Annual Conference Southwest Council of Foreign Language Teachers, Hilton Inn, El Paso, Texas:

The greatest barrier to the Mexican-American child's scholastic achievement is that the schools, reflecting the dominant view of the dominant culture, want the child to grow up as another Anglo. This he cannot do except by denying himself and his family and his forebearers, a form of machoism which no society would demand of its children.⁴²

Manuel proposed that a more positive approach to improving the socioeconomic level of this ethnic group was through development of one cultural aspect, a more effective language program in the school setting.⁴³

⁴⁰Upham and Wright, op. cit., p. 37.

⁴¹Gonzales, Proceedings, op. cit., p. 119.

⁴²A. Bruce Gaarder, Bilingual Education, Hearings Before the Special Subcommittee on Bilingual Education of the Committee on Labor and Public Welfare, United States Senate, 90th Congress, 1st Session, on S. 428, Part I, May 18, 19, 26, 29, and 31, 1967 (Washington: Government Printing Office, 1967), p. 168.

⁴³Manuel, op. cit., p. 7.

IV. LINGUAL CONSIDERATIONS IN IMPROVING THE EDUCATIONAL STATUS OF THE SPANISH- SURNAME POPULATION IN TEXAS

Examination of the literature indicated authorities agreed that development of a better language structure was paramount in improving the educational status of not only the poverty-level Spanish-surname child but of disadvantaged children generally.

In the guide published by the Board of Education of the City of New York, it was noted that the full intellectual development of the child depended upon his being able to use language as a tool for thinking. In order to accomplish this he must understand the symbolic nature of language and must be able to manipulate the grammar of language.⁴⁴

Passow stated that social class differences in perceptual abilities and general environmental orientation decreased with age, while language differences tended to increase. He concluded if language was a prerequisite for concept formation and problem solving, then a language deficit had a significant effect on all levels of learning.⁴⁵

⁴⁴ Board of Education, Let's Look at First Graders: A Guide to Understanding and Fostering Intellectual Development in Young Children (New York: Educational Testing Service, Board of Education, 1965), p. 13.

⁴⁵ A. H. Passow (ed.), Education in Depressed Areas (New York: Teachers College, Columbia University, 1963), pp. 163-80.

Gray and others reported it was difficult to make distinctions between language development and concept formation. She cited there was evidence that culturally deprived children tended to be more retarded in spoken language than in understood language. Their home situations made adequate concept development difficult. The environment lacked stimulating materials relevant to school achievement. Spatial and temporal disorganization made the discovery of common objects more difficult.⁴⁶

According to Ralph disadvantaged children's pronunciation and articulation, vocabulary, sentence length, and use of grammatical and syntactic structures resembled the language of privileged children of a younger age level. As a result disadvantaged children were limited in language facility required to do independent thinking and problem solving. Ralph concluded that unless new educational strategies were introduced at an early age, this gap in ability to manipulate symbols was rarely narrowed sufficiently to enable culturally disadvantaged children to succeed in school.⁴⁷

⁴⁶ Susan W. Gray and others, Before First Grade: The Early Training Project for Culturally Disadvantaged Children (New York: Teachers College Press, 1966), pp. 25-28.

⁴⁷ Jane Beasley Ralph, "Language and Speech Deficits in Culturally Disadvantaged Children: Implications for the Speech Clinician," Journal of Speech and Hearing Disorders, 32:3:212, August, 1967.

Pines described Bloom, Bruner, and Hunt as cognitive psychologists who believed that an individual's achievement depended primarily on what he had learned before the age of four.⁴⁸

Bloom, Davis, and Hess reported that in the deprived home language usage was relatively limited. Much communication depended on gestures and other nonverbal means. When language was used it was brief and frequently grammatically incorrect. This restricted the number of grammatical forms which were used. Thus, the deprived child entered school inadequately prepared for the typical language tasks of the first grade. According to these authors research has documented the status of culturally deprived children in language development with regard to prerequisite skills, speech development, extent of vocabulary, and grammatical usage. Children from poverty level homes were found to be weak in auditory and visual discrimination at the beginning of school. The oral vocabulary of these children was different from that of more advantaged children. The disadvantaged also lacked abstract language such as words for categories, class names, and ideas that were not concrete in nature. Weaknesses in language, limited range of experiences, and restricted stimulation of

⁴⁸ Maya Pines, "A Pressure Cooker for Four-Year-Old Minds," Harper's Magazine, January, 1967, p. 55.

an intellectual nature produced certain cognitive deficiencies.⁴⁹

Bloom, Davis, and Hess stressed that present school programs have not succeeded in overcoming the initial differences between culturally advantaged children and those who were less fortunate. They proposed that the most effective way to prepare the culturally deprived for elementary school was to provide language skills in nursery school and kindergarten that the home had failed to give in the earlier training period.⁵⁰

Ausubel, in Bloom, Davis, and Hess's book, listed four implications for education in this respect. The first concept was that of prevention in which a preschool program should stress perceptual discrimination and language development. The second concept was that of amelioration in which more use of concrete level materials should be used to facilitate transfer to an abstract level of cognitive functioning. The third concept was a teaching strategy which should include consideration of the individual child's readiness status, mastery of all previous learning before new tasks were introduced, and use of structured learning materials to facilitate sequential

⁴⁹ Benjamin S. Bloom, Allison Davis, and Robert Hess, Compensatory Education for Cultural Deprivation (New York: Holt, Rinehart and Winston, Inc., 1965), pp. 70-71.

⁵⁰ Ibid., pp. 21-23.

learning. The fourth concept was the need to develop intrinsic motivation for learning, based on success in this endeavor.⁵¹

Ralph reported that adequate language development in the early years was important but was not sufficient in itself. Of greater significance was the nature of the instructional program. Although there was diversity of speech and language problems among the culturally deprived, the underlying problem of language structure was highly similar in the ethnic groups represented. Ralph endorsed the program developed by Bereiter and Engelmann as one which was highly effective in improving the language structure of the culturally deprived child.⁵²

According to Bereiter and Engelmann the base of disadvantaged children's difficulty in reasoning and thinking was the lack of differentiation in the words they used. The culturally privileged child learned early that sentences were composed of words. Since he understood the single words he began to use, he could then expand them into other combinations. In contrast, the culturally deprived child tended to approximate the entire sequence of noises. Because of his limited experience in communicating verbally with adults who used proper language structure, his first words approximated meaningless syllables which vaguely resembled words and

⁵¹ Ibid., p. 76.

⁵² Ralph, op. cit., pp. 204-11.

inflections he heard but did not understand. These sounds lacked distinctive parts he could combine into new sentences. The deprived child had difficulty understanding a sentence that he was expected to imitate or repeat. Since, in part, he could not imitate or repeat it, this interfered with his learning to understand it.⁵³ This phenomenon was demonstrated by Bereiter and Engelmann's use of the language test they devised in which the child was requested to repeat a sentence such as: "The mother told the boy he could have a penny or a nickel." In such a statement the child did not understand that a choice was involved and frequently could not repeat the last three words of the sentence.⁵⁴

Bereiter and Engelmann emphasized the close relationship between language and logical thinking instead of language and social communication. These investigators stressed the approach of direct instruction to help the child master the formal aspects of language. Instead of trying to improve the language the child already possessed, the goal was that of teaching him a different or more formal language which would replace the first one, particularly in the school setting.

⁵³ Carl Bereiter and Siegfried Engelmann, Teaching Disadvantaged Children in the Preschool (Engelwood Cliffs, N.J.: Prentice-Hall, Inc., 1966), p. 36.

⁵⁴ Ralph, op. cit., p. 206.

Instruction was, at first, formal and structured. The language pattern was then extended into less structured social situations.⁵⁵

Teaching techniques called patterned drills were based on three requirements. First, the minimum language taught must be capable of representing the reality of naming and pointing and of creating a symbolic equivalent of what was observable in physical reality. Secondly, instruction must include provisions for indicating truth or nontruth in an unambiguous way. Thirdly, the teacher and the child must share the procedure so that the child could benefit from the teacher's feedback which was designed to bring him closer to the concept taught.⁵⁶

Bereiter and Engelmann first used their language curriculum at the University of Illinois with a class of fifteen children from a very low socioeconomic background. Median chronological age at the time school began was four and one-half years. Language age as measured by the Illinois Test of Psycholinguistic Ability was at the three-year level. After nine months of instruction the children approximated a normal level on the verbal subtests of the Illinois Test of Psycholinguistic Ability except for vocabulary, and were

⁵⁵ Ibid., p. 211.

⁵⁶ Bereiter and Engelmann, op. cit., p. 123.

about six months above average on verbal encoding, the measure of free, descriptive use of language. In addition, the children, although they had not yet entered kindergarten, were ready to enter the first grade according to results of the Wide Range Achievement Test. This program has been expanded to include research in progress on several groups of children who have received the language training and a similar program in reading and arithmetic for one or two years.⁵⁷

Educators in the Southwest have not only been concerned with national need of a structured language program for all culturally disadvantaged children, but more specifically have recognized the necessity of an intensive language curriculum for children whose mother tongue was Spanish. Manuel described the typical poverty level Spanish-surname child as one who had to learn English as a second language and use this in his schoolwork while he continued to speak Spanish when away from school. This resulted in an insufficient mastery of either language for many of these children. The Spanish learned at home was of poor quality, even to the extent that the fund of ideas which words expressed was limited. The homes did not provide the opportunity and stimulus to develop concepts common to other children. In school the proficiency of the mother tongue was arrested by lack of instruction in the written

⁵⁷ Ralph, op. cit., p. 211.

forms of the language, and the development of English was retarded by the lack of sufficient contact with English.⁵⁸

The concern for more adequate language instruction for Spanish-surname children is not of recent origin. As early as 1930 M. Gamio, in his book Mexican Immigration to the United States, and as cited by Manuel observed these children were taught in English beginning with the initial public school contact. They were not introduced to the written forms of their native language until they reached high school.⁵⁹

The recognition of need for a more adequate educational program for the Spanish-surname child has existed for more than half a century according to Smith. She cited the Elementary and Secondary Education Act of 1965 with its emphasis on educational opportunities for the disadvantaged as having unusual impact upon the teaching of English as a second language. She noted, however, that this created controversy which resulted in confusion as to the best way to teach Spanish-surname children to become more academically able.⁶⁰

⁵⁸ Ibid., p. 117.

⁵⁹ H. T. Manuel, Spanish and English Editions of Stanford-Binet, in Relation to the Abilities of Mexican Children, Bulletin No. 3542 (Austin: University Publications, The University of Texas Press, 1935), p. 5.

⁶⁰ Marguerite Smith, English A Second Language for Mexican-Americans, ERIC Clearing House on Rural Education and Small Schools (Las Cruces: New Mexico State University, March, 1968), pp. 1-5.

Authorities concurred that education of these children must begin earlier than the customary age of six if they were to function efficiently in the language of school instruction by that age. Disagreement centered around particular teaching strategies and the controversy of whether English or Spanish should be the basic instrument for instruction.

More than twenty years ago Sanchez and Otto stressed that although Spanish-surname children had particular language and cultural problems, the fundamental features of teaching these children were essentially the same as for all children. Concurrently, these authors cautioned that individual differences of these children should not be ignored.⁶¹

Manuel described the teaching of a second language, particularly its early stages, as a task very different from teaching of a mother tongue. He noted the linguistic aspects involved the knowledge of similarities and differences of the languages. Superimposed on these were cultural differences between the culture of the learner and that of the group whose language he was learning.⁶²

⁶¹ George I. Sanchez and Henry J. Otto, A Guide for Teachers of Spanish Speaking Children, State Department of Education Bulletin No. 464 (Austin: State Department of Education, 1946), p. 7.

⁶² Herschel T. Manuel, "Bilingualism," Encyclopedia of Educational Research, Chester W. Harris, editor (New York: The Macmillan Company, 1900), p. 146.

The problem of teaching English as a second language was quite different from that of teaching English as the vernacular, according to Kavetsky and Morrison. The English-speaking child upon entering school had mastered such basic features of the language as oral control over several thousand words, rhythm, and fundamental grammatical patterns. One function of the teacher of the English-speaking child was to broaden this background. An important task of the teacher of the non-English-speaking child, however, was to develop these language patterns in the second language in order for the child to communicate.⁶³

Research conducted by Macnamara revealed two important patterns of bilingualism in relation to primary children. First, if a child developed skills in one of his two languages, he generally showed a deficit in the other which created a "balance effect." Secondly, the use of the child's second language as a medium of instruction involved retardation in the subject matter taught but did not affect attainment in either of his two languages.⁶⁴

⁶³ Joseph Kavetsky and J. Cayce Morrison, "English As a Second Language," Encyclopedia of Educational Research, Chester W. Harris and Marie Liba, editors (New York: The Macmillan Company, 1960), p. 478.

⁶⁴ John Macnamara, Bilingualism and Primary Education (Edinburgh, England: Edinburgh University Press, 1966), p. vi.

Angel in recognizing the close relationship between language and cognitive development, expressed the belief that cognitive development rather than language should receive the major emphasis in educational programs for poverty level Spanish-surname children. In this perspective language would assume "the place of means and not ends as is common in most programs today."⁶⁵

Conversely, Stocker attributed underachievement of poverty level Spanish-surname children to the singular factor of language. He deplored the grouping of Spanish-surname children in a special pre-first grade to teach them English with subsequent promotion to regular first grade curriculum. Instead, he supported the use of Spanish to educate these children with English being taught as a second language.⁶⁶

The Southwest Council of Foreign Language Teachers passed a resolution in 1965 which proposed more teaching in Spanish for bilingual children. It was further resolved that an instructional program in English be developed using special techniques for the teaching of English as a second language. It was recommended that in the early phase of this program an

⁶⁵ Frank Angel, Program Content to Meet the Educational Needs of Mexican-Americans, ERIC Clearing House on Rural Education and Small Schools (Las Cruces: New Mexico State University, March, 1968), p. 1.

⁶⁶ Joseph Stocker, "Se Habla Espanol," American Education, 3:5:17, May, 1967.

audio-lingual approach to learning should be used. Reading and writing should be taught after basic oral command of the second language had been acquired.⁶⁷

In the opinion of Gomez it seemed educationally sound to teach the young child the reading and writing process using the language in which he already had verbal skills. Once he conceptualized these processes, he could then make the transition to a second language with greater ease.⁶⁸ Gomez however, recommended a more complete program for the four- and five-year old poverty level Spanish-surname child to establish readiness for formal first grade instruction. He proposed the creation of learning centers which would emphasize the use of oral language, utilizing both English and Spanish, in preparation for more formal academic work. Such centers should provide experiences for developing perceptual and conceptual skills, motor coordination, vocabulary development, and appreciation of the aesthetic. In addition, activities should be

⁶⁷ Committee on Labor and Public Welfare, Bilingual Education, Hearings Before the Special Subcommittee on Bilingual Education of the Committee on Labor and Public Welfare, United States Senate, 90th Congress, 1st Session on S. 428, Part II, June 24 and July 21, 1967 (Washington: Government Printing Office, 1967), pp. 634-79.

⁶⁸ Severo Gomez, "The Meaning and Implications of Bilingualism for Texas Schools," Proceedings, pp. 47-48.

encouraged which would increase social relations among the group and with other cultural groups.⁶⁹

Anderson agreed with Gomez that the mother tongue was the best medium for learning, especially in the early developmental periods. This was advantageous because language was not only an instrument for communication and learning but was a global way of thinking, feeling, and acting. Imbedded in each language was a set of values of which speakers of another language may be unaware.⁷⁰

Gaarder observed that establishment of bilingual programs in schools should increase rather than lessen emphasis on the proper teaching of English to children who spoke another mother tongue. The present policy has assumed that English was not a foreign language for residents of the United States. Thus, it was usually taught as if the bilingual child already knew English. Gaarder estimated that failure to recognize the mother tongue and to present English as a second language had helped to produce functional illiteracy in almost three out of every four Spanish speakers in Texas.⁷¹

Manuel observed that although teaching of English as a second language was difficult, command of this language was

⁶⁹Ibid., p. 58.

⁷⁰Theodore Anderson, "The Concept of Bilingualism," Proceedings, pp. 64-65.

⁷¹Gaarder, op. cit., p. 54.

necessary for both the welfare of the individual and the community. Beginning the child's school experience in Spanish had advantages in reducing frustrations in the transitional period from home to school. Manuel expressed the view, however, that a more realistic approach was to teach English to these children in the preschool years. This seemed particularly advantageous in view of the Texas law that all basic instruction should be in English. He added that a decision to place the emphasis upon English did not imply a lack of appreciation of Spanish or little concern for the frustrations of the transitional period. He believed children could maintain a high regard for both languages when major effort was given to developing ability in English.⁷²

Smith conceded that beginning the teaching in Spanish had merit from a cultural viewpoint. The basic concern, however, was not the use of Spanish per se in educating the poverty level Spanish-surname child but its use as a vehicle for better communication in English. Smith proposed that a curriculum be planned which permitted the child to communicate in both English and Spanish. She emphasized that to attain accuracy and fluency in English, instruction must include sequenced drills and meaningful repetition.⁷³

⁷²Manuel, Spanish-Speaking Children, op. cit., pp. 117-22.

⁷³Smith, op. cit., pp. 6-7.

Concomitantly, the Texas Education Agency recognized that in the beginning stage of learning a new language the child could not follow the natural processes by which he learned his native tongue. This guide recommended the beginning phase be exclusively audio-lingual until the child had acquired the ability to understand and use minimum vocabulary in simple sentence patterns basic to communicating in the school environment.⁷⁴

Presentations at the National Conference on Educational Opportunities for Mexican-Americans, April 25-26, 1968, Austin, Texas, revealed a number of varied experimental studies were in progress to better determine a more appropriate educational program for poverty level Spanish-surname youth. Melarangno, described a program in Santa Monica, California in which fifth and sixth grade bilingual students acted as tutors for first grade students in teaching a specific reading readiness skill.⁷⁵ Ibarra and del Campo demonstrated a program in San Diego County, California which was exploring innovative and exemplary

⁷⁴ Texas Education Agency, Preschool Instruction Program for Non-English Speaking Children, Bulletin 642 (Austin: Texas Education Agency, 1964), p. 4.

⁷⁵ Ralph J. Melarangno, "Students as Tutors with Elementary Children /California/" (paper presented at the National Conference on Educational Opportunities for Mexican-Americans, Austin, Texas, April 25-26, 1968). As there are eleven authors cited in this chapter from this Conference, herein-after only the author's name, paper title, and Conference will be given.

methods of teaching English as a second language.⁷⁶ Programs for migrants in several California counties were discussed by Lopez. The migrant child was instructed in a situation enabling him to interact with resident children in a multi-ethnic, cross-cultural setting at the same time he was receiving instruction for his particular needs. A variety of grouping practices were employed, ranging from one-to-one tutoring to small group instruction within the regular classroom as well as external to it.⁷⁷ Thonis described a Marysville, California, center in which reading was taught in Spanish, and English was presented orally.⁷⁸

Programs operating in the urban Miami, Florida, area were demonstrated by Bell. Goals of these programs were to provide beginning language and reading skills for first and second grade non-English-speaking children. Instructional methods included modern foreign language teaching and techniques and second dialect teaching techniques combined with traditional and innovative reading techniques.⁷⁹

⁷⁶ Herb Ibarra and Phil del Campo, "Exemplary Programs in English as a Second Language California," Conference.

⁷⁷ Frances Lopez and William Stockard, "Regional Demonstration Project for Migrant Education California," Conference.

⁷⁸ Eleanor Thonis, "Primary Bilingual Program California," Conference.

⁷⁹ Paul W. Bell, "Miami Linguistic Reading Program Florida," Conference.

Adaptations of the Miami linguistic materials in a New Mexico setting were described by Pascual. The goal was to impart English language skills in grades one and two through implementation of linguistically-oriented materials using English as a second language.⁸⁰ Southard outlined a program in New Mexico which presented developmental language lessons via educational radio.⁸¹

A number of Texas programs were discussed at this national conference. The project in the Good Samaritan Center, San Antonio, focused on new methods of teaching English as a second language to Spanish-speaking children between the ages of three and six, while at the same time attempting to preserve and reinforce the use of their mother tongue.⁸² Ott presented a program operating in three field test sites in Texas which was adapted to the individual needs of the child. Predetermined standards were not used as a basis for promotion. Pupils moved progressively through learning experiences sequenced for gradual but systematic development of concepts

⁸⁰ Henry W. Pascual, "Adaptations of Miami Linguistic Materials /New Mexico/", Conference.

⁸¹ J. K. Southard, "Project Move Ahead--Basic Education Via Radio /New Mexico/", Conference.

⁸² Constance N. Swander, Nikki Rubio Blankenship, Kenneth C. Kramer, and Shari Nedler, "Bilingual Program for Spanish-Speaking Children in Early Childhood /Texas/", Conference.

and language. Instruction in Spanish was given in subject fields while time allotments were equated with English instruction.⁸³ Two programs sponsored by the Southwest Educational Development Laboratory were described. The goal of the Language-Bilingual Education Program was to provide the child with a non-English language background, systematic instruction in his native language to enhance his self-image, increase his capacity and desire to learn a second language, and help him to become literate in two languages. In the Mexican American Education Program, priority was given to the migrant child. It was noted, however, that the program was also finding success in urban areas.⁸⁴ Vallado described a program in the Corpus Christi, Texas, schools which first introduced reading in Spanish through the use of experience charts. Later, reading skills were transferred to English and reading continued in both languages.⁸⁵

⁸³ Elizabeth Ott and Josue Gonzalez, "Bilingual Program Demonstration with Children from San Antonio [Texas and New York]," Conference.

⁸⁴ Joseph Cardenas and Elizabeth Ott, "Program for Improvement of Education for Mexican Americans [Texas]," Conference.

⁸⁵ A. N. Vallado, "Follow Through [Texas]," Conference.

V. SUMMARY

In summary, a review of the literature revealed a need for educational change, if education was to be effective in meeting the socioeconomic needs of the people in the United States. Persons who did not complete high school were at a particular disadvantage in gaining employment that would reward them both economically and socially. Studies showed the number of youth who did not complete high school was great enough to cause concern not only for these individuals but for society as well. Research indicated there was a significant correlation between the level of school achievement and the socioeconomic level of the family. Youth from poverty income families attained less education than those from more affluent homes. The family's social position also influenced the educational attainment of its members.

Using this information as a point of departure for study of a particular ethnic group, data showed a relatively small number of the national population was concentrated in the Southwest but a significant number of persons in this locality were of proportionately low socioeconomic level. In delineating the information more specifically to the State of Texas and its Spanish-surname population, a review of the literature revealed this ethnic group had a high incidence of poverty, larger families and a lower educational attainment

level than the other two major ethnic groups in the state. Data showed this group to be poorly equipped to meet the challenge of a society oriented to high level skills and advanced education. There was general agreement that a more effective educational program for the poverty level Spanish-surname group was needed to ameliorate its socioeconomic differences.

Examination of the literature indicated educational requirements for the poverty level Spanish-surname population were greater than those for a comparable Anglo population. The combined effects of social and economic deprivation together with a bilingual and bicultural background were factors that limited their school achievement.

A survey of studies related to the educational needs of culturally disadvantaged children in the general population showed they suffered from a poverty of appropriate experience that would provide a basis for formal education. The low income Spanish-surname population, in particular, had a value system that conflicted with the current educative process. The family structure of this group, even when weakened by poverty or acculturation, continued to subscribe to cultural patterns that made educational attainment a difficult procedure. Since it was neither feasible nor possible to change the cultural patterns of this group, it seemed more plausible to focus on one cultural aspect in improving the educative

process. Investigators agreed that a more effective language program in the school setting would enhance educational attainment.

In exploring the literature it was determined that language was a primary tool necessary for learning. The environment of the culturally disadvantaged child did not provide appropriate experiences to develop the type of language needed for concept formation and the cognitive processes required in school. A structured language program in the preschool years was proposed as an effective measure to better prepare this child for the more formal academic demands. The particular teaching strategies of Bereiter and Engelmann, were cited as effective methods for helping the child master the formal aspects of language which his home environment had neglected. Instead of trying to improve the language the child already possessed, the goal was that of teaching him a different or more formal language which would replace the first one, especially in the school setting.

Since the poverty level Spanish-surname child in Texas usually had Spanish as a mother tongue there was an acute need to provide him with a language development program that would better prepare him for learning in the school setting. The typical poverty level Spanish-surname child had to learn English as a second language and use this in school while he

continued to speak Spanish when away from school. Since the Spanish he learned at home was of poor quality this resulted in an insufficient mastery of either language for many of these children.

The Elementary and Secondary Education Act of 1965 had much impact on the teaching of English as a second language. Controversy ensued as to whether English or Spanish should be used as the basic language for instruction and disagreement arose regarding the preference of particular teaching strategies. The literature noted that teaching English as a second language required a different approach than teaching English as the vernacular. One author proposed that cognitive development rather than language per se receive the major emphasis in educational programs for poverty level Spanish-surname children.

A group of foreign language teachers resolved there should be more teaching in Spanish. In teaching English as a second language this group recommended that special techniques be used stressing an audio-lingual approach in the early phase of the program. Other investigators concurred that the mother tongue should be used in the readiness program to make the transition to English a less stressful one.

At least one investigator recommended that English be emphasized in teaching poverty level Spanish-surname children

in the preschool years. This seemed realistic in view of the Texas law which stipulated that basic school instruction should be conducted in English. One author noted that the concern should not be which language to use but in what manner could the language be used as a vehicle for better communication in English. The Texas Education Agency recommended that English be taught to these children, using the audio-lingual approach in the beginning phase.

Presentations at the 1968 National Conference on Educational Opportunities for Mexican-Americans revealed a number of varied experimental programs were being conducted to aid in planning more appropriate education programs for poverty level Spanish-surname youth.

CHAPTER III

PROCEDURES

This study attempted to determine the effectiveness of an audio-lingual approach of English language instruction with Spanish-speaking kindergarten pupils. The data were treated statistically by the t test.

I. SAMPLE AND SAMPLING TECHNIQUES

The data for the study were obtained from the kindergarten population of two elementary schools in the Houston Independent School District. The two elementary schools selected were from among the twenty elementary schools participating in the Title I Project, "Focus on Achievement."

McFarland reported in The Texas Outlook the inception of the first Title I Project under the National Defense Elementary and Secondary Education Act of 1965, in the nation. This program, titled "Focus on Achievement," began operation in Houston, Texas, on September 29, 1965. It was operative in three senior high schools, three junior high schools, and twenty elementary schools in densely populated, depressed metropolitan areas.¹

¹John W. McFarland, "Focus on Achievement," The Texas Outlook, 50:2:26-29, 54, February, 1966.

This program was begun as the result of the Houston Independent School District's board action.

At the regular School Board meeting 19 July 1965, Mr. J. K. Butler presented a proposal regarding a project for the acceleration of academic progress among pupils in deprived areas, moving that it become the policy of the Houston Independent School District and that the Administration be requested to recommend a program in keeping with the proposal as outlined:

- a. Several schools in deprived areas to be designated as project centers for the improvement of academic progress of elementary-, junior-, and senior-high-school pupils for the purpose of determining how best to strengthen the instructional program in these schools for rapid acceleration of pupil progress during the next three years.
- b. Emphases to be placed on special phases of the on-going program and of the enlargement of certain services and numbers of personnel needed to accomplish the purpose, including the following areas:
 - (1) Instructional materials centers
 - (2) Reading clinics
 - (3) Laboratory experiences for the social sciences and elementary-school history and geography
 - (4) Oral and written composition clinics
 - (5) Consultants for science, mathematics, health and physical fitness, art, and music
- c. To provide for extended counseling service through increased guidance services and personnel to more students and their families.
- d. To foster a well-developed program of field trips to important establishments, institutions, and businesses and industries in this area.
- e. To promote before- and after-school opportunities for learning.

- f. To develop expanded vocational education and the STAY program for junior and senior students.²

Glenn Fletcher in 1966 when resubmitting Application for Financial Assistance for the Education of Children from Low-Income Families, "Focus on Achievement," listed on page 1 of Exhibit A names of schools, number of children residing in area, and percent of low income families. Two of twenty elementary schools listed were Anson Jones and Sidney Sherman. Anson Jones had 28.59 percent of its families reported as having low incomes and Sidney Sherman had 24.30 percent of its families in the low income group.³

These two schools submitted reports to the Director of Research, Houston Independent School District, in March, 1968, attesting to the number of non-English speaking children in their kindergarten enrollment. Anson Jones reported sixty-nine children of 106 children enrolled were non-English speaking; this composed 65.09 percent of the total kindergarten enrollment. Sidney Sherman reported that 24.14 percent of its kindergarten children were non-English speaking.

² Houston Independent School District, Minutes (Houston: Board of Education of Houston Independent School District, Vol. 98a, 1965).

³ Houston Independent School District, "Application for Financial Assistance for the Education of Children from Low-Income Families: Focus on Achievement" (Houston: Houston Independent School District, 1966). (Mimeographed.)

Conversely, this represented thirty-five children out of 145 kindergartners.

Houston Independent School District personnel concerned with curriculum and language instruction realized a need for strengthening the English language development of Spanish-speaking kindergarten children. As a result a pilot project was established at Anson Jones and Sidney Sherman Elementary Schools. The objective of this pilot project was to determine the effectiveness of a special program for pupils who entered school speaking Spanish. Emphasis was placed on the development of speaking and listening skills necessary for adequate and practical use of the English language.⁴

The sample was taken from a total population of 251 kindergarten children enrolled in Anson Jones and Sidney Sherman Elementary Schools, Houston Independent School District. The initial sample consisted of 176 children who were selected because they met the criterion of being Spanish-speaking. This specific population was divided into sixteen groups of children located in four kindergarten classrooms in the two selected elementary schools. In 110 days of operation forty-three children withdrew so that 133 children remained when the project was terminated.

⁴ Houston Independent School District, Pilot Projects in Curriculum and Instruction in the Houston Independent School District (Revised edition; Houston: Houston Independent School District, 1968).

Children in the total kindergarten population who were born during the months of March through August and who were currently eligible for public school attendance in the Houston Independent School District were assigned at random to one of the two morning kindergartens in Anson Jones and Sidney Sherman Elementary Schools. No more than fourteen of the children who spoke Spanish were assigned to each of the four pilot and four control groups. Each group was separated from its class for thirty minutes each day for instruction in language development. The pilot group received an audio-lingual structured approach to language development. The control group was instructed by using an extension of the regular language program of the kindergarten curriculum. The groups were instructed separately outside their regular classrooms by a language development teacher.

Eligible kindergarten pupils, in the total population, who were born during the months September through February were assigned at random to one of two afternoon kindergarten classes in these two schools. The Spanish-speaking children were further assigned to four pilot and four control groups with no more than fourteen in each group. Each group was separated from its classroom for language development instruction. The pilot group received audio-lingual structured language development. The control group was instructed by using an

extension of the regular language program of the kindergarten curriculum. The groups were instructed separately outside their regular classroom by a language development teacher.

Each kindergarten pupil included in this study was instructed in and evaluated by the Kindergarten Evaluation of Learning Potential. The material from this instrument was introduced at midyear and the Summary Test was completed by May 15, 1968. All items were taught and evaluated, with the exception of No. 9, Printing. This item was unacceptable when considered in light of the Houston Independent School District's policies.

The Summary Test generated scores on three learning levels plus a total score. These scores were combined to obtain class scores in order to compare group characteristics.

II. THE EVALUATIVE INSTRUMENT

The Kindergarten Evaluation of Learning Potential (KELP) is a new approach to the classification of kindergarten children according to their probable success in first grade. It consists of a battery of eleven items of which all but two tap three levels of learning ability. The items are taught by the kindergarten teacher in day to day work with the children. The teacher observes and records the success of the children as they use these materials, and as a result is able to predict their probable success in the early primary grades.

Eleven items make up the KELP battery. These items represent learning situations which stimulate development in auditory perception, visual discriminations, language skills, number concepts, physical adeptness, and social interaction. Most of the time can be used in class-sized groups and in individual, self-study situations. Items are appropriate for both work-time and play-time activities.

Nine of these items reveal patterns of function at three learning levels. Level One is the "conditioned or associative response" level--copying or following on a step-by-step basis; Level Two is the "concept formation or grasping-a-whole idea" level; and Level Three is the "creative self-direction" level--expressing novel and unique ideas. The remaining two activities, skipping and color identification, are functions of Level One only.

The following items make up the activities and functions in the KELP program:

1. Skipping. During instruction in rhythms and games, the teacher observes the ability of the child to skip on alternate feet.
2. Color Identification. The children are taught ten color names during easel painting and other regular activities.
3. Bead Design. Success at Level One requires the child to copy five bead-design cards. At Level Two the child is asked to reproduce one of the designs from memory, and at Level Three he creates a design of his own.

4. Bolt Board. This item consists of a wooden stand having ten holes of diminishing sizes with bolts and nuts to match. Level One requires the child to take apart, mix, and assemble the bolt board. To attain Level Two, he explains the principles on which he worked. Level Three requires that he show his own organization, either in dismantling, or in sorting the bolts for assembly.
5. Block Design. The child arranges nine colored blocks to match a pattern on which similar blocks are printed. At Level Two he performs the same task when the pattern is miniaturized and the outlines are removed. At Level Three he makes a design of his own.
6. Calendar. Discussions based on the kindergarten calendar provide a situation in which the child demonstrates, at Level One, his verbal ability by naming the date, naming the day of the week, or telling about the weather in a complete sentence. At Level Two he tells the correct sequence of the days of the week. At Level Three he is required to explain the social significance of a holiday.
7. Number Boards. There are plastic pieces of different lengths having the top surfaces embossed with units and the appropriate numerals. Level One requires the ability to count to ten and to recognize the numerals when presented in random order. Level Two requires that the child demonstrate understanding of the interrelations of the numbers up to five. At Level Three he independently arranges and develops different groupings of numbers up to eight and nine and ten.
8. Safety Signs. Seven play-size signs are used to elicit responses basic to parts of reading readiness. At Level One the child reads or dramatizes correct recognition of five signs; at Level Two he reproduces a sign from memory; and at Level Three he uses the letters available to make words of his own.
9. Printing. At Level One the child learns to print his name in manuscript from the teacher's model; at Level Two he prints his name with capital and lower case letters without a model; and at Level Three he prints words on his own initiative as needed in drawing or other work.

10. Auditory Discrimination. This item consists of fifteen small toys whose names begin with one of three consonants. At Level One the child identifies the articles with names correctly articulated. At the Level Two he sorts the articles according to beginning sounds; at Level Three he thinks of other words that begin the same as any of those taught.
11. Social Interaction. At Level One the child can report accurately what happened in a conflict situation. At Level Two he can apply in a new situation any of the rules, agreements, or standards of behavior in the kindergarten. At Level Three he acts on the rules he expresses verbally.

The materials became an integral part of the kindergarten program. Some of the devices were used independently or individually and were placed on the shelves with other games and equipment. Some of the observations were made during periods when the whole group was teacher-guided. Evidence of student learning was then noted and recorded at the end of the period. Some items were evaluated for an entire class after the teacher knew each child well.

With KELP, the evaluation took place as a continuing part of the learning situation itself. The child was observed over a period of months rather than for an hour or two, and thus the learning potential as related to the KELP materials was more clearly separated from other kinds of learning. With KELP materials, the child was provided directed opportunities to acquire the skills which were evaluated.

A Summary Test was administered to the children at the end of the school year. This test provided the opportunity

for the teacher to compare the results of each child's performance on KELP activities, which she had previously observed, with a formal, structured group test over similar content. As the pupils were familiar with the associations and concepts presented in the Summary Test, the scores provided a point of reference for revealing the course of growth and development of each child from his first days in class through the last days.⁵

Correlation coefficients between KELP and first grade ratings and between KELP and Binet IQ's centered in the mid-sixties with a range from .40 to .81. Similar correlations were obtained between KELP and Metropolitan readiness and achievement tests.⁶

Norms were based on a sample of 2,461 kindergarten children in ninety-six classes working with forty-nine teachers. Four of the classes were from the lowest socioeconomic area of a major industrial city. Four were from homes in districts at the opposite social extreme. The median population was in the middle class suburban stratification. The population sample was drawn exclusively from California schools, but over 60

⁵John A. R. Wilson and Mildred C. Roebeck, Kindergarten Evaluation of Learning Potential: A Curriculum Approach to Evaluation (New York: McGraw-Hill Book Company, Inc., 1965), pp. 1-43, 60-188.

⁶Ibid., pp. 43-59.

percent of the schools were in districts with highly mobile populations that had moved recently into the area from nearly all parts of the United States.⁷

III. AUDIO-LINGUAL STRUCTURED APPROACH TO LANGUAGE DEVELOPMENT

Bruner stated that in the last two decades research indicated that previous learning theories were not only poorly stated but generated little transfer in learning. Recent studies indicated that learning properly under optimum conditions led one to "learn how to learn." This learning had been designed to produce general understanding of the structure of a subject matter.⁸ Bruner further stated:

. . . Grasping the structure of a subject is understanding it in a way that permits many other things to be related to it meaningfully. To learn structure, in short, is to learn how things are related.

.

The often unconscious nature of learning structure is perhaps best illustrated in learning one's native language. Having grasped the subtle structure of a sentence, the child very rapidly learns to generate many other sentences based on this model though different in content from the original sentence learned. . . . Yet, while young children are able to use the structural rules of English, they are certainly not able to say what the rules are.⁹

⁷ Ibid., pp. 214-23.

⁸ Jerome S. Bruner, The Process of Education (New York: Vintage Books, 1960), pp. 2-8.

⁹ Ibid., pp. 7-8.

Not only has the process of education recently come under criticism but now the most appropriate time to educate is being questioned. Cass, discussing Benjamin Bloom's Stability and Change in Human Characteristics, pointed out that half of all growth in human intelligence took place between birth and age four, another 30 percent occurred between the ages of four and eight; and the remaining 20 percent was accomplished between eight and seventeen. Conversely, 80 percent of the intellectual development was completed by the end of the second grade. Bloom contended that in the later stages of the development of characteristics only powerful and consistent environments could produce marked changes.¹⁰

Edwards related that American psychologists have only recently and reluctantly left the stimulus-response hookup and recognized the thinking, learning, and behaving schools of Switzerland's Piaget and Russia's Vygotsky of the 1920's and 1930's. She related that the chief intellectual task of the child was the creation of a symbolic vocabulary before the age of six. This symbolic vocabulary was his medium of life as a human being. Linguists have suggested that there was a built-in neurological mechanism for language learning

¹⁰ James Cass, "The Crucial Years Before Six," Saturday Review, June 15, 1968, p. 59.

but unless the proper circumstances occurred it could never develop. Experience--the right experience--was essential.¹¹

Ralph reported that culturally deprived children had difficulty being able to use language as a means of carrying on a dialogue with themselves. They lacked the use of language as means of getting and dealing with incoming verbal cues. This lack seemed to have a profound influence on later learning. More important than early language intervention was the nature of the instructional program in preschool or kindergarten and its relationship to formal learning tasks of education.¹²

Angel spoke to the educational problem of the Mexican-American when he said:

. . . While recognizing the intimate relationship between language and cognitive development, it is the belief of this writer, that of the two, cognitive development rather than language offers more promise and should receive the major emphasis in school programs for Mexican-Americans, with language assuming the place of means and not ends as is common in most programs today.¹³

¹¹ Esther P. Edwards, "Kindergarten is too Late," Saturday Review, June 15, 1968, pp. 68-70, 76-79.

¹² Jane Beasley Ralph, "Language and Speech Deficits in Culturally Disadvantaged Children: Implications for the Speech Clinician," Journal of Speech and Hearing Disorders, 32:3:203-13, August, 1967.

¹³ Frank Angel, Program Content to Meet the Educational Needs of Mexican-Americans, ERIC Clearing House on Rural Education and Small Schools (Las Cruces: New Mexico State University, March, 1968), p. 1.

Bereiter and Engelmann in the language program developed with disadvantaged Negro preschool children used patterned drills based on three requirements, that the minimum language taught must (1) be capable of representing the reality of naming and pointing and creating a symbolic equivalent of what was observable in physical reality, (2) have provisions for indicating truth or nontruth in an unambiguous way, and (3) be shared by the teacher and the child so that the child could benefit from the teacher's feedback which was designed to bring him closer to the concept.

The Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners, was predicated on the premise that socioeconomically disadvantaged Spanish-speaking kindergartners needed cognitive skills taught as all language is learned by listening then speaking. (See Appendix A.) The patterns used were those that met the three requirements established by Bereiter and Engelmann. The first nine lessons were based on the first order statement: (This is a _____) and the concluding nineteen lessons were based on the second order statement, (This _____ is _____). Vocabulary words, while unimportant in themselves, were selected, where applicable, from those words the kindergarten children

¹⁴ Carl Bereiter and Siegfried Engelmann, Teaching Disadvantaged Children in the Preschool (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966), p. 123.

would meet early in their school experience. (See Appendix B.)

These twenty-eight lessons were taught as rapidly as the children could learn them. No time schedule was adhered to other than the rate at which the children could learn. The language development teacher was the judge when a lesson had been learned. Frequent review of previous lessons confirmed what had been learned. Even though no time schedule was adhered to each teacher taught for 110 days. This amounted to fifty-five hours of language development instruction.

IV. ANALYSIS PROCEDURES

An analysis of the variance of the means of the pilot and control groups was used to interpret the test data. The Kindergarten Evaluation of Learning Potential was scored by the classroom teacher who taught and administered the Summary Test. Test booklets were studied by the investigator and scores tabulated by learning levels and total scores.

Student's t :

. . . is the ratio of a deviation from the mean or other parameter, in a distribution of sample statistics, to the standard error of that distribution.

. . . Statistic t , on the other hand, applies regardless of the size of sample.¹⁵

¹⁵Joy P. Guilford, Fundamental Statistics in Psychology and Education (fourth edition; New York: McGraw-Hill Book Company, Inc., 1965), p. 182.

Fisher's t formula:

$$t = \frac{M_1 - M_2}{\sqrt{\left(\frac{\sum x_1^2 + \sum x_2^2}{N_1 + N_2 - 2} \right) \left(\frac{N_1 + N_2}{N_1 N_2} \right)}}$$

was chosen since the means of the distributions in this study were uncorrelated.¹⁶

A t ratio was computed to test the null hypothesis. A nonsignificant t at the .05 level of confidence indicated that the differences between variance could be attributed only to chance. A significant t ratio indicated that the null hypothesis of no difference between variances was rejected.

Student's t, derived from Fisher's t formula for t when the means are uncorrelated was used to test the difference in the following null hypotheses:

1. There is no significant difference between Level One scores of Sherman Pilot and Jones Pilot Groups on the Kindergarten Evaluation of Learning Potential.
2. There is no significant difference between Level Two scores of Sherman Pilot and Jones Pilot Groups on the Kindergarten Evaluation of Learning Potential.
3. There is no significant difference between Level Three scores of Sherman Pilot and Jones Pilot Groups

¹⁶
Ibid., p. 183.

on the Kindergarten Evaluation of Learning Potential.

4. There is no significant difference between Total scores on Sherman Pilot and Jones Pilot Groups on the Kindergarten Evaluation of Learning Potential.
5. There is no significant difference between Level One scores of Sherman Control Groups and Jones Control Groups on the Kindergarten Evaluation of Learning Potential.
6. There is no significant difference between Level Two scores of Sherman Control Groups and Jones Control Groups on the Kindergarten Evaluation of Learning Potential.
7. There is no significant difference between Level Three scores of Sherman Control Groups and Jones Control Groups on the Kindergarten Evaluation of Learning Potential.
8. There is no significant difference between Total scores of Sherman Control Groups and Jones Control Groups on the Kindergarten Evaluation of Learning Potential.
9. There is no significant difference between the Level One scores of the Morning Pilot Groups and the Afternoon Pilot Groups on the Kindergarten Evaluation of Learning Potential.

10. There is no significant difference between the Level Two scores of the morning pilot groups and the afternoon pilot groups of the Kindergarten Evaluation of Learning Potential.
11. There is no significant difference between the Level Three scores of the morning pilot groups and the afternoon pilot groups of the Kindergarten Evaluation of Learning Potential.
12. There is no significant difference between the Total scores of the morning pilot groups and the afternoon pilot groups of the Kindergarten Evaluation of Learning Potential.
13. There is no significant difference between Level One scores of the morning control groups and the afternoon control groups on the Kindergarten Evaluation of Learning Potential.
14. There is no significant difference between Level Two scores of the morning control groups and the afternoon control groups on the Kindergarten Evaluation of Learning Potential.
15. There is no significant difference between Level Three scores of the morning control groups and the afternoon control groups on the Kindergarten Evaluation of Learning Potential.

16. There is no significant difference between Total scores of the morning control groups and the afternoon control groups on the Kindergarten Evaluation of Learning Potential.
17. There is no significant difference between Level One scores of the pilot groups and control groups on the Kindergarten Evaluation of Learning Potential.
18. There is no significant difference between Level Two scores of the pilot groups and control groups on the Kindergarten Evaluation of Learning Potential.
19. There is no significant difference between Level Three scores of the pilot groups and control groups on the Kindergarten Evaluation of Learning Potential.
20. There is no significant difference between Total scores of the pilot groups and control groups on the Kindergarten Evaluation of Learning Potential.

V. SUMMARY

The Kindergarten Evaluation of Learning Potential, Level One, Level Two, Level Three, and Total scores were used as an evaluative instrument to determine if the Audio-Lingual

Structured Approach to Language Development for Spanish-Speaking Kindergartners was a more effective method of teaching Spanish-speaking kindergartners than the regular language program of the Houston Independent School District. The KERP Test was administered to 133 kindergartners in Anson Jones and Sidney Sherman Elementary Schools.

From a population of 251 kindergartners a sample of 133 was selected. The criteria for sample selection was that the child was Spanish-speaking and completed the language instructional program. School selection purported the sample was from the lower socioeconomic group.

Eligible five year olds were assigned randomly to the kindergarten teachers in Anson Jones and Sidney Sherman Elementary Schools. They were further assigned to pilot and control groups.

Mean variances were submitted to the t test to determine significant differences in learning levels of pilot and control groups. All computations were done by hand.

CHAPTER IV

RESULTS OF THE STUDY

This study involved an initial sample of 176 eligible kindergartners in two elementary schools in the Houston Independent School District. These children were divided into sixteen groups assigned to the four kindergarten teachers in the two elementary schools, Sidney Sherman and Anson Jones. The t test was applied to the means of the scores on the Kindergarten Evaluation of Learning Potential to determine if there was a significant difference in the groups.

I. DISTRIBUTION OF THE SAMPLE

The initial sample was reduced in size over the instructional period of 110 days from 176 pupils to 133 pupils. The distribution of the sample indicated that 80.39 percent of the Morning Pilot Groups completed the study while only 78.84 percent of the Afternoon Pilot Groups completed the instructional program. (See Table I.) The pupils in the control groups left at higher rates than the pilot groups. Only 71.42 percent of the Morning Control Groups completed the instructional period with 67.74 percent of the Afternoon Control Groups enrolled at the program's closure.

TABLE I
DISTRIBUTION OF THE SAMPLE

School	PILOT A.M. Assigned	Completed	Percent Completed	School	CONTROL A.M. Assigned	Completed	Percent Completed
Sherman							
Teacher 1	14	13	92.86	Teacher 1	13	9	69.23
Teacher 2	13	10	76.92	Teacher 2	12	7	58.33
Jones				Jones			
Teacher 1	12	9	75.00	Teacher 1	9	7	77.77
Teacher 2	12	9	75.00	Teacher 2	8	7	87.50
Total	51	41	80.39		42	30	71.42
	PILOT P.M.				CONTROL P.M.		
Sherman				Sherman			
Teacher 1	14	11	78.57	Teacher 1	12	8	66.66
Teacher 2	14	9	64.29	Teacher 2	10	5	50.00
Jones				Jones			
Teacher 1	12	10	83.33	Teacher 1	5	5	100.00
Teacher 2	12	11	91.66	Teacher 2	4	3	75.00
Total	52	41	78.84		31	21	67.74
Total Pilot	103	82	79.61	Total Control	73	51	69.86

II. STUDENT'S t TEST

A t test was computed on Level One, Level Two, Level Three, and Total Scores of the Kindergarten Evaluation of Learning Potential of the following groups:

Sherman Pilot Groups - Jones Pilot Groups
 Sherman Control Groups - Jones Control Groups
 Morning Control Groups - Afternoon Control Groups
 Morning Pilot Groups - Afternoon Pilot Groups
 Pilot Groups - Control Groups

Since the degrees of freedom varied among the groups the following significant t ratios at the .05 level of confidence are quoted:

degrees of freedom	significant t at .05 level
49	2.008
80	1.990 ¹
131	1.978 ¹

A t test was computed on the Level One, Level Two, Level Three, and Total Scores means of the Kindergarten Evaluation of Learning Potential for the pilot groups in Sherman and Jones Elementary Schools. (See Table II.) The t ratio for Level One Score means, Sherman Pilot, and Jones Pilot, with 80 degrees of freedom was 1.015, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant

¹Joy P. Guilford, Fundamental Statistics in Psychology and Education (fourth edition; New York: McGraw-Hill Book Company, Inc., 1965), p. 581.

TABLE II
COMPARISON OF SHERMAN AND JONES PILOT GROUPS

	Level One		Level Two		Level Three		Total	
	Sherman	Jones	Sherman	Jones	Sherman	Jones	Sherman	Jones
$\leq x^2$	36009	30407	34609	25380	7663	7606	206492	172007
$\leq x$	1226	1063	1183	932	514	480	2923	2475
N	43	39	43	39	43	39	43	39
M	28.51	27.26	27.51	23.90	11.95	12.30	67.97	63.46
$\leq x^2$	1054	1433	2063	31.08	1685	1698	87.47	15193
t	1.015 ns		2.033 sig. .05		0.244 ns		1.15 ns	

difference between Level One Scores of Sherman Pilot and Jones Pilot Groups was not rejected.

The t ratio for Level Two Score means, Sherman Pilot and Jones Pilot Groups, with 80 degrees of freedom was 2.033, significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Two Scores of Sherman Pilot and Jones Pilot Groups was rejected.

The t ratio for Level Three Score means, Sherman Pilot and Jones Pilot Groups, with 80 degrees of freedom was 0.244, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Three Scores of Sherman Pilot and Jones Pilot Groups was not rejected.

The t ratio for Total Score means, Sherman Pilot and Jones Pilot Groups, with 80 degrees of freedom was 1.15, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Total Scores of Sherman Pilot and Jones Pilot Groups was not rejected.

A t test was computed on the Level One, Level Two, Level Three, and Total Scores means of the Kindergarten Evaluation of Learning Potential for the Control Groups in Sherman and Jones Elementary Schools. (See Table III.) The t ratio for Level One Score means, Sherman Control and Jones Control, with 49 degrees of freedom was 0.147, not significant at .05

TABLE III
COMPARISON OF SHERMAN AND JONES CONTROL GROUPS

	Level One		Level Two		Level Three		Total	
	Sherman	Jones	Sherman	Jones	Sherman	Jones	Sherman	Jones
$\sum x^2$	24257	18119	18200	17719	3461	3712	117678	105596
$\sum x$	829	625	686	591	271	268	1786	1484
N	29	22	29	22	29	22	29	22
M	28.59	28.41	23.66	26.86	9.34	12.18	61.59	67.45
$\sum x^2$	559	363	1973	1843	929	87	7658	5493
t	0.147 ns		1.278 ns		2.207 *sig.		1.263 ns	

level of confidence. Therefore, the null hypothesis of no significant difference between Level One Scores of Sherman Control and Jones Control Groups was not rejected.

The t ratio for Level Two Score means, Sherman Control and Jones Control Groups, with 49 degrees of freedom was 1.278, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Two Scores of Sherman Control and Jones Control Groups was not rejected.

The t ratio for Level Three Score means, Sherman Control and Jones Control Groups, with 49 degrees of freedom was 2.207, significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Three Scores of Sherman Control and Jones Control Groups was rejected.

The t ratio for Total Score means, Sherman Control and Jones Control Groups, with 49 degrees of freedom was 1.263, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Total Scores of Sherman Control and Jones Control Groups was not rejected.

A t test was computed on the Level One, Level Two, Level Three, and Total Scores means of the Kindergarten Evaluation of Learning Potential for Morning and Afternoon Control

Groups. (See Table IV.) The t ratio for Level One Score means, Morning and Afternoon Control, with 49 degrees of freedom was 1.007, not significant at .05 level of confidence. Therefore the null hypothesis of no significant difference between Level One Scores of Morning and Afternoon Control Groups was not rejected.

The t ratio for Level Two Score means, Morning and Afternoon Control, with 49 degrees of freedom was 0.801, not significant at .05 level of confidence. Therefore the null hypothesis of no significant difference between Level Two Scores of Morning and Afternoon Control Groups was not rejected.

The t ratio for Level Three Score means, Morning and Afternoon Control, with 49 degrees of freedom was 0.102, not significant at .05 level of confidence. Therefore the null hypothesis of no significant difference between level Three Scores of Morning and Afternoon Control Groups was not rejected.

The t ratio for Total Score means, Morning and Afternoon Control, with 49 degrees of freedom was 0.730, not significant at .05 level of confidence. Therefore the null hypothesis of no significant difference between Total Scores of Morning and Afternoon Control Groups was not rejected.

A t test was computed on the Level One, Level Two, Level Three, and Total Scores means of the Kindergarten

TABLE IV
COMPARISON OF MORNING AND AFTERNOON CONTROL GROUPS

	Level One		Level Two		Level Three		Total	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
$\sum x^2$	24100	18276	20318	15601	4043	3130	126765	96509
$\sum x$	840	614	726	551	315	224	1881	1389
N	30	21	30	21	30	21	30	21
M	28.00	29.23	24.20	26.23	10.50	10.66	62.70	66.14
$\sum x^2$	580	324	2749	1144	736	714	8826	4637
t	1.007 ns		0.801 ns		0.102 ns		0.730 ns	

Evaluation of Learning Potential for Morning and Afternoon Pilot Groups. (See Table V.) The t ratio for Level One Score means, Morning and Afternoon Pilot Groups, with 80 degrees of freedom was 2.076, significant at .05 level of confidence. Therefore the null hypothesis of no significant difference between Level One Scores of Morning and Afternoon Pilot Groups was rejected.

The t ratio for Level Two Score means, Morning and Afternoon Pilot Groups, with 80 degrees of freedom was 0.935, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Two Scores of Morning and Afternoon Pilot Groups was not rejected.

The t ratio for Level Three Score means, Morning and Afternoon Pilot Groups, with 80 degrees of freedom was 1.460, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Three Scores of Morning and Afternoon Pilot Groups was not rejected.

The t ratio for Total Score means, Morning and Afternoon Pilot Groups, with 80 degrees of freedom was 1.646, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Total Scores of Morning and Afternoon Pilot Groups was not rejected.

A t test was computed on the Level One, Level Two, Level Three, and Total Scores means of the Kindergarten

TABLE V
COMPARISON OF MORNING AND AFTERNOON PILOT GROUPS

	Level One		Level Two		Level Three		Total	
	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon	Morning	Afternoon
ΣX^2	31167	35280	29515	31054	6959	8310	178017	200482
ΣX	1093	1196	1021	1094	451	536	2565	2826
N	41	41	41	41	41	41	41	41
M	26.65	29.17	24.90	26.68	11.00	13.07	62.56	68.92
$\Sigma \psi^2$	2029	392	4090	1863	1998	1303	17548	5970
t	2.076 sig. .05		0.935 ns		1.460 ns		1.646 ns	

Evaluation of Learning Potential for Pilot and Control Groups. (See Table VI.) The t ratio for Level One Score means, Pilot and Control with 131 degrees of freedom was 0.653, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level One Scores of Pilot and Control Groups was not rejected.

The t ratio for Level Two Score means, Pilot and Control with 131 degrees of freedom was 0.482, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Two Scores of Pilot and Control Groups was not rejected.

The t ratio for Level Three Scores means, Pilot and Control with 131 degrees of freedom was 1.032, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Level Three Scores of Pilot and Control Groups was not rejected.

The t ratio for Total Score means, Pilot and Control with 131 degrees of freedom was 0.543, not significant at .05 level of confidence. Therefore, the null hypothesis of no significant difference between Total Scores of Pilot and Control Groups was not rejected.

TABLE VI
COMPARISON OF PILOT AND CONTROL GROUPS

	Level One		Level Two		Level Three		Total	
	Pilot	Control	Pilot	Control	Pilot	Control	Pilot	Control
$\sum X^2$	66447	42376	60569	35919	15269	7173	378499	223274
$\sum X$	2289	1454	2115	1277	987	593	5381	3270
N	82	51	82	51	82	51	82	51
M	27.91	28.51	25.79	25.04	12.04	10.57	65.72	64.12
$\sum x^2$	2550	923	6017	3944	3389	1477	24337	13609
t	0.653 ns		0.482 ns		1.032 ns		0.543 ns	

III. SUMMARY

The initial sample of kindergartners in this study was reduced from 176 at its inception to 133 at its closure. The pupils in the Control Groups left at a higher rate than did the pupils in the Pilot Groups. The remaining 133 kindergartners were given the Kindergarten Evaluation of Learning Potential which generated scores on three levels and a total score.

The means of these scores, by levels and total score were treated statistically by the t test. The t test was computed to test the null hypothesis of significant difference between Sherman and Jones Pilot Groups, Sherman and Jones Control Groups, Morning and Afternoon Control Groups, Morning and Afternoon Pilot Groups, and Pilot and Control Groups.

The null hypothesis was rejected in all tests except: Level Two when Sherman and Jones Pilots were compared, Level Three when Sherman and Jones Controls were compared, and Level One when Morning and Afternoon Pilots were compared.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

I. SUMMARY

This study was an attempt to determine the effectiveness of an audio-lingual approach of English language instruction with Spanish-speaking kindergarten pupils in two elementary schools. These two elementary schools were located in the Houston Independent School District, Houston, Texas.

The study was limited to a sample of 133 pupils from a population of 251 eligible kindergarten pupils in Anson Jones and Sidney Sherman Elementary Schools. Only Spanish-speaking pupils who completed the fifty-five hours of instruction during the 110 day instructional period were included in the sample. Pupils in the sample were considered to be from the lower socioeconomic homes since they attended schools with high incidences of poverty families that were part of the Houston Independent Schools District's Title I Project, "Focus on Achievement."

Children in each school were randomly assigned to each kindergarten teacher in the two elementary schools. The younger children, born March through August were assigned to morning classes and the older children, born September through February, were assigned afternoon classes. Children in each

class were assigned to either a pilot or control group. No group had more than fourteen members.

The Pilot groups were instructed in the Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners each day for thirty minutes for 110 days. The Control groups had their regular language curriculum extended for thirty minutes each day for 110 days. Both Pilot and Control groups were instructed by a Language Development Teacher for thirty minutes per day away from their regular classroom.

The Kindergarten Evaluation of Learning Potential was taught and tested by the regular classroom teacher. Scores were generated by three learning levels: Level One--Association, Level Two--Conceptualization, Level Three--Creative Self-Direction, and combined Total Scores.

The differences in the means for each of the three learning levels and total scores of Sherman Pilot and Jones Pilot groups, the Sherman and Jones Control groups, the Morning Control and Afternoon Control groups, the Morning and Afternoon Pilot groups, and the Pilot and Control groups were submitted to the t test for significant difference of the means. The null hypothesis was not rejected in all tests except: Level Two--Conceptualization--when Sherman and Jones Pilots were compared, Level Three--Creative Self-Direction--when Sherman and

Jones Controls were compared, Level One--Association when Morning and Afternoon Pilots were compared.

II. CONCLUSIONS

The results of the study are the basis for these conclusions:

1. Spanish-speaking children of the lower socioeconomic level, with smaller number of non-English speakers in their group, who have been instructed in the Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners, have better Associative Learning, as tested by the Kindergarten Evaluation of Learning Potential than those who have been instructed by the regular kindergarten language instructional program.
2. Spanish-speaking children of the lower socioeconomic level with many non-English speakers in their group who have been instructed in the regular kindergarten language instruction program achieve on higher levels of Creative Self-Direction as tested by the Kindergarten Evaluation of Learning Potential when compared to those who have been instructed in the Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners.

3. Spanish-speaking older kindergartners who have large numbers of non-English speakers in their groups, when instructed by the Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners, achieve at high levels of Associative Learning, as tested by the Kindergarten Evaluation of Learning Potential, than those who have been instructed in the regular kindergarten language instructional program.

III. RECOMMENDATIONS

The following recommendations are based on the findings of this study:

1. The Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners should be continued for a longer period of time.
2. The study should be replicated and evaluated by more than one instrument.
3. The Audio-Lingual Structured Approach to Language Development for Spanish-Speaking Kindergartners should become a teaching strategy by the regular classroom teacher.

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APPENDIX A

AUDIO-LINGUAL STRUCTURED APPROACH TO LANGUAGE DEVELOP-
MENT FOR SPANISH-SPEAKING KINDERGARTNERS

AUDIO-LINGUAL STRUCTURED APPROACH TO LANGUAGE DEVELOP-
MENT FOR SPANISH-SPEAKING KINDERGARTNERS

These lessons were designed with a dual purpose. The first was to teach English as a second language and the second was to develop a cognitive style.

Bereiter and Engelmann, in their work with urban Negro disadvantaged children, described this process in the following manner:

All the tasks in the basic language program revolve around two simple statement forms: "This is a _____" and "This _____ is _____." Yet, these two forms become the media for transmitting a wide range of language and thinking skills. Through these two forms, the child learns first how to identify the things in his world and how to ask questions about them. He then learns how to compare one thing with another, referring to size, texture, and sound. The two basic statement forms then transport him to the level of more sophisticated comparisons, where many things are grouped together according to a certain conceptual dimension, such as position or color or shared characteristics. In working with the two basic statement forms, he learns the rudiments of empirical investigation. He learns to ask himself certain questions and proceed according to the way he answers them after investigating the material before him. In other words, he learns the basis of if--then reasoning.¹

¹Carl Bereiter and Siegfried Engelmann, Teaching Disadvantaged Children in the Preschool (Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1966), pp. 168-69.

Lesson No. 1

Language model:

This is a (book).

Vocabulary:

pencil

book

chair

desk

Concepts:

First order statement; identity, singular.

Lesson No. 2

Language model:

This is a (table).What is this?

Vocabulary:

<u>table</u>	<u>pen</u>	<u>crayon</u>	<u></u>
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Concepts:

First order statement; identity, singular.

Lesson No. 3

Language model:

This is a (book).Is this a (book)?No, this is not a (book).Yes, this is a (book).

Vocabulary:

chalkboarderaserruler

Concepts:

First order statement; identity, singular, affirmative and
negative.

Lesson No. 4

Language model:

This is a (book).What is this?Is this a (book)?No, this is not a (book).Yes, this is a (book).Tell me about this.Tell me what this is not.

Vocabulary:

paintbrushpaperpaint

Concepts:

First order statement; identity, singular, affirmative and
negative.

Lesson No. 5

Language model:

This is a (book).What is this?Is this a (book)?Yes, this is a (book).No, this is not a (book).This is what?

Vocabulary:

paste closet window ceilingfloor wall chalk _____

Concepts:

First order statement; identity, singular, affirmative and
negative.

Lesson No. 6

Language model:

These are (books).Are these (books)?Yes, these are (books).No, these are not (books).

Vocabulary:

chairsdeskscrayonspencils

Concepts:

First order statement; identity, plural, affirmative and
negative.

Lesson No. 7

Language model:

These are (blocks).

What are these?

Are these (blocks)?

No, these are not (blocks).

Yes, these are (blocks).

These are what?

What are these not?

Vocabulary:

balls

blocks

chalkboards

Concepts:

First order statement; identity, plural, affirmative and negative.

Lesson No. 8

Language model:

These are (balls).What are these?Are these (balls)?No, these are not (balls).Yes, these are (balls).Tell me about these.Tell me what these are not.

Vocabulary:

Review all previous vocabulary.

Concepts:

First order statement; identity, plural, affirmative and
negative.

Lesson No. 9

Language model:

This is a (pig).Is this a (pig)?Yes, this is a (pig).No, this is not a (pig).What is this?Tell me about this.Now tell me about these.These are (pigs).What are these?

Vocabulary:

<u>pig</u>	<u>chicken</u>	<u>horse</u>	<u>cow</u>
<u>rooster</u>	<u>sheep</u>	<u>duck</u>	<u>mouse</u>
<u>goat</u>	<u>rabbit</u>	<u>hen</u>	<u>donkey</u>
<u>pony</u>	<u>swan</u>	<u>turkey</u>	

Concepts:

First order statement; identity, singular, plural, affirma-
tive and negative.

Lesson No. 10

Language model:

This (ball) is (big).This (ball) is (not big).Is this (ball) (big)?Yes, this (ball) is (big).No, this (ball) is (not big).

Vocabulary:

<u>hat</u>	<u>cold</u>	<u>big</u>	<u>little</u>
<u>fast</u>	<u>slow</u>	<u>soft (tactual)</u>	<u>hard</u>
<u>fat</u>	<u>skinny</u>	<u>tall</u>	<u>short</u>
<u>dark</u>	<u>light</u>	<u>straight</u>	<u>crooked</u>
<u>smooth</u>	<u>rough</u>	<u>heavy</u>	<u>light</u>
<u>pretty</u>	<u>ugly</u>	<u>loud</u>	<u>soft (auditory)</u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>
<u> </u>	<u> </u>	<u> </u>	<u> </u>

Concepts:

Second order statement; polar discrimination, singular.

Lesson No. 11

Language model:

What can you say about this (line)?

Is it (long)?

No, it is (not long).

Tell me what it is not.

This (line) is (not short).

I don't know.

This (line) is (short) and (fat).

Vocabulary:

(Previous polar pairs.)

Concepts:

Second order statement; multiple polar discriminations,
singular.

Lesson No. 12

Language model:

These (dogs) are (fat).

What can I say about these dogs?

Vocabulary:

Use previous identity objects and polar words.

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Concepts:

Second order statement; polar discrimination, plural.

Lesson No. 13

Language model:

This (dog) is (not fat).This (dog) is (skinny).What can I say about this (dog)?What is this (dog) (not)?This (dog) is (not) what?

Vocabulary:

Use previous identity objects and polar words.

Concepts:

Second order statement; polar deductions.

Lesson No. 14

Language model:

This (pig) is (next to) this (pig).

Is this (pig) (next to) this (pig)?

No, this (pig) is not (next to) this (pig).

Yes, this (pig) is (next to) this (pig).

What can I say about this (pig)?

(Juan) is (before) (Carlos).

Is (Juan) (before) (Carlos)?

Yes, (Juan) is (before) (Carlos).

No, (Juan) is not (before) (Carlos).

(Juan) is what?

(Carlos) is (after) (Juan).

Is (Carlos) (after) (Juan)?

Yes, (Carlos) is (after) (Juan).

No, (Carlos) is not (after) (Juan).

Vocabulary:

after

before

next

Concepts:

Second order statement; special polars, next to, before -

after.

Lesson No. 15

Language model:

This (car) is (blue).

This (car) is not (blue).

Is this (car) (blue)?

Yes, this (car) is (blue).

No, this (car) is not (blue). This (car) is (red).

These (things) are (blue).

These (things) are not (blue).

Are these (things) (blue)?

Yes, these (things) are (blue).

No, these (things) are not (blue). These (things) are (red).

Vocabulary:

<u>things</u>	<u>blue</u>	<u>red</u>	<u>yellow</u>
<u>green</u>	<u>purple</u>	<u>orange</u>	<u>black</u>
<u>white</u>	<u>gray</u>	<u>brown</u>	

Concepts:

Second order statement; nonpolar attributes, color.

Lesson No. 16

Language model:

Where is the (top)?

The (top) is (on) the (table).

Is this (top) (over) the (table)?

No, the (top) is not (over) the (table).

Yes, the (top) is (over) the (table).

Vocabulary:

onoverunderinin front ofin back ofbetweenoff

Concepts:

Second order statement; nonpolar attributes, preposition.

Lesson No. 17

Language model:

This (animal) is a (zebra).What kind of (animal) is this?Tell us what this (animal) is not.This (animal) is not a (pig).What do I know about this (zebra)?(Zebras) are (animals).What do we do with (zebras)?

Vocabulary:

lioncamelelephantmonkeytigerzebrabearsealgiraffehippopotamus

Concepts:

Second order; identity statement, category, zoo animals.

Lesson No. 18

Language model:

This (animal) is a (beaver).What kind of (animal) is this?Tell us what this (animal) is not.This (animal) is not a (pig).What do I know about this (beaver)?(Beavers) are (animals).What do we do with (beavers)?

Vocabulary:

chipmunkbeaverdeerrabbitraccoonskunksquirrelsnakebirdfoxfrogowlturtle

Concepts:

Second order; identity statement, category: wild animals.

Lesson No. 19

Language model:

This (animal) is a (horse).

What kind of (animal) is this?

Tell us what this (animal) is not.

This (animal) is not a (pig).

What do I know about this (horse)?

(Horses) are (animals).

What do we do with (horses)?

Vocabulary:

duck

horse

donkey

cow

swan

chicken

sheep

turkey

cat

pig

Concepts:

Second order; identity statements, category: farm animals.

Lesson No. 20

Language model:

This (toy) is a (drum).What kind of a (toy) is this?Tell us what this (toy) is not.This (toy) is not a (boat).What do I know about this (drum)?(Drums) are (toys).What do we do with (toys)?

Vocabulary:

balloon boat baseball footballbicycle doll drum kiteroller skate tricycle wagon whistletoy

Concepts:

Second order; identity statement, category: toys.

Lesson No. 21

Language model:

This (tool) is a (hammer).What kind of (tool) is this?Tell us what this (tool) is not.This (tool) is not a (saw).What do I know about this (hammer)?(Hammers) are (tools).What do we do with (tools)?

Vocabulary:

<u>tool</u>	<u>hammer</u>	<u>saw</u>	<u>screw driver</u>
<u>screw</u>	<u>nail</u>	<u>file</u>	<u>ax</u>
<u>hatchet</u>	<u>rake</u>	<u>hoe</u>	<u>shovel</u>
<u>pliers</u>	<u>tractor</u>	<u>rope</u>	<u>ladder</u>
<u>lawn mower</u>			

Concepts:

Second order; identity statement, category: tools.

Lesson No. 22

Language model:

This (weapon) is a (knife).What kind of (weapon) is this?Tell us what this (weapon) is not.This (weapon) is not a (bow and arrow).What do I know about this (knife)?(Knives) are (weapons).What do we do with (weapons)?

Vocabulary:

weaponcannonknifegunriflebow and arrow

Concepts:

Second order; identity statement, category: weapon.

Lesson No. 23

Language model:

This (vehicle) is an (airplane).What kind of (vehicle) is this?Tell me what this (vehicle) is not.This (vehicle) is not a (bicycle).What do I know about this (airplane)?(Airplanes) are (vehicles).What do we do with (vehicles)?

Vocabulary:

<u>vehicle</u>	<u>airplane</u>	<u>bicycle</u>	<u>boat</u>
<u>bus</u>	<u>car</u>	<u>cart</u>	<u>ship</u>
<u>truck</u>	<u>jet</u>	<u>helicopter</u>	<u>train</u>
<u>scooter</u>	<u>skate</u>	<u>submarine</u>	<u>wagon</u>
<u>motorcycle</u>	<u>tricycle</u>		

Concepts:

Second order; identity statement, category: vehicle.

Lesson No. 24

Language model:

This (plant) is a (tree).

What kind of (plant) is this?

Tell me what this (plant) is not.

This (plant) is not (grass).

What do I know about this (tree)?

(Trees) are (plants).

What do we do with (plants)?

Vocabulary:

<u>plants</u>	<u>grass</u>	<u>trees</u>	<u>flower</u>
<u>cotton</u>	<u>corn</u>	<u>wheat</u>	

Concepts:

Second order; identity statement, category: plants.

Lesson No. 25

Language model:

This (building) is a (school).What kind of (building) is this?Tell me what this (building) is not.This (building) is not a (store).What do I know about this (school)?(Schools) are (buildings).What do we do with (buildings)?

Vocabulary:

buildingsbarnhousecastlestoreschooltentteepeehospitalchurch

Concepts:

Second order; identity statement, category: buildings.

Lesson No. 27

Language model:

This (piece of furniture) is a (bed).What (piece of furniture) is this?Tell me what (piece of furniture) this is not?This (piece of furniture) is not a (T.V.).What do I know about this (bed)?A (bed) is a (piece of furniture).What do we do with a (piece of furniture)?

Vocabulary:

<u>furniture</u>	<u>bed</u>	<u>chair</u>	<u>dresser</u>
<u>sofa</u>	<u>stove</u>	<u>washing machine</u>	<u>telephone</u>
<u>cup</u>	<u>dish</u>	<u>table</u>	<u>crib</u>
<u>desk</u>	<u>mirror</u>	<u>night stand</u>	<u>iron</u>
<u>lamp</u>	<u>fan</u>	<u>refrigerator</u>	<u>coffee pot</u>
<u>television</u>	<u>radio</u>	<u>clock</u>	<u>air-conditioner</u>
<u>glass</u>	<u>fork</u>	<u>spoon</u>	<u>dish pan</u>
<u>pan</u>	<u>pot</u>	<u>bowl</u>	<u>tea kettle</u>

Concepts:

Second order; identity statement; category: furniture.

Lesson No. 28

Language model:

This article of clothing is a (cap).What (article of clothing) is this?Tell me what (article of clothing) this is not?This (article of clothing) is not a (slip).What do I know about this (cap)?A (cap) is an (article of clothing).What do we do with an (article of clothing)?

Vocabulary:

<u>clothing</u>	<u>cap</u>	<u>coat</u>	<u>glove</u>
<u>hat</u>	<u>mitten</u>	<u>muff</u>	<u>ribbon</u>
<u>rubber</u>	<u>sock</u>	<u>umbrella</u>	<u>wallet</u>
<u>shoes</u>	<u>suit</u>	<u>blue jeans</u>	<u>pajamas</u>
<u>slip</u>	<u>necktie</u>	<u>purse</u>	<u>apron</u>
<u>belt</u>	<u>blouse</u>	<u>nightgown</u>	<u>bonnet</u>
<u>diapers</u>	<u>bib</u>	<u>dress</u>	<u>jacket</u>
<u>shirt</u>	<u>boots</u>	<u>raincoat</u>	<u>watch</u>

Concepts:

Second order; identity statement; category: articles of
clothing.

APPENDIX B

WORD LIST

WORD LIST

The composition of this word list evolved from the instructional experiences in an urban lower socioeconomic kindergarten. Over a period of several years a teacher of Mexican-American children collected these words from the following sources.

1. Necessary classroom communication.
2. Concepts found in folklore and fairy tales.
3. Words from kindergarten songs.
4. Language necessary to accommodate concept load of primary basal readers.

The original list was modified by eliminating proper nouns and variant forms. Numerals in parentheses indicate the audio-lingual lesson in which these words appear. The selection of words for the audio-lingual lessons was based on processes of cognition.

about	and	back (15)
above	angry	bacon (25)
across	animal	bag
act	announcer	bake
address	answer	baker
adventure	any	ball
afraid	anybody	balloon
after (14)	apartment	banana
afternoon	apple (25)	bang
again	apron (27)	bank
ago	are	barber
ahead	arm	barber shop
air	army	bark
airplane (22)	around	barn (24)
alive	as	baseball (19)
all	ask	basement
almost	astronaut	basket
alone	at	bath
along	ate	bathe
also	aunt	be
always	awake	beach
am	away	bean
an	awful	beanstalk
anaconda	baby	beat

bear (16)	blast	branch
beautiful	blast off	brave
beaver (17)	blew	bread (25)
because	blink	break
bed (26)	blizzard	breakfast
bedroom	block (7)	breath
bee	blow	breathe
been	blowhole	bright
before (14)	blue (15)	bring
begin	blueberry	brook
behind	boat (19)	brother
believe	bone	brought
bell	book (1)	brown (15)
bend	both	brush
berry	bottle	bubble
best	bottom	buckskin
better	bought	bug
between (15)	bounce	build
beyond	bouquet	bump
bicycle (19)	bow (21)	bunny
big (10)	bowl (26)	burn
bird (17)	bowwow	bus (22)
birthday	box	bush
black (15)	boy	busman

busy	car (22)	chimney
but	care	chipmunk (17)
butter (25)	careful	choose .
butterfly	carpenter	Christmas
button	carriage	circus
buy	carry	city
buzz	cart (22)	clean
by	carton	clear
cabbage (25)	castle (24)	click
caboose	cat (18)	climb
cage	catch	clinkety-clank
cake (25)	cattle	closet (5)
call	caught	clothes .
came	cellar	cloud
camel (16)	cent	clown
camera	certain	coat (27)
can	chair (1)	coil
candle	chance	cold (10)
candy (25)	chase	color
cannon (21)	chatter	colt
cannot	cherry (25)	comb
can't	chick	come
canyon	chicken (9)	contest
cap (27)	children	cook

cookbook	cub	does
cookie (25)	cup (26)	dog
copilot	curl	doll (19)
copy	cut	dollar
corn (23)	cute	dolphin
corner	daddy	done
cotton (23)	dance	donkey (9)
couch	dark (10)	don't
could	dear	door
couldn't	deer (17)	doorknob
count	did	dot
countdown	didn't	dough
country	different	down
cousin	dig	drain board
cover	dinner	draw
cow (18)	direction	dream
cowboy	dirt	dress (27)
crack	discover	dresser (26)
crawl	dish (26)	drink
creak	distance	drive
cream	dizzy	droop
cross	do	drop
crow	dock	drown
cry	doctor	drum (19)

dry	ever	feed
duck (9)	every	feel
duckling	everybody	feet
each	exciting	fell
ear	experiment	fellow
early	explain	felt
earn	explore	fence
earth	express	few
easy	eye	field
eat	eyeglasses	fifth
edge	face	fill
egg (25)	fail	find
eight	fair	fine
either	fairy	finish
electricity	fallen	fire
elephant (16)	family	first
elevator	far	fish
eleven	farm	five
else	farmer	fix
empty	fast (10)	flash
engine	father	flat
enough	faucet	flew
escape	favorite	flip
even	feather	float

floor (5)	furnace	grass (23)
flour	game	grasshopper
flower (23)	garden	gray
flutter	gardener	great
fly	gas	green (15)
food	gasoline	grew
foot	gate	grin
football (19)	gave	grind
forest	get	groceries
forge	giant	ground
forgotten	gift	group
found	girl	grow
fourth	give	guess
fox (17)	glad	had
friend	glove (27)	hair
frightened	gnome	hairbrush
frightening	go	hall
frisky	goat (9)	hammer (20)
frog (17)	gobble	hand
from	goldfish	handle
front (15)	good	hang
fruit	got	happen
full	grandfather	happy
fun	grandmother	harp

has	him	hug
hat (27)	himself	huge
hatch	his	hummingbird
have	hobby	hundred
hay	hold	hungry
he	hole	hunt
head	holidays	hurry
hear	holly	hurt
heavy	hollyberry	husband
he'd	home	ice
held	honey (25)	ice cream (25)
helicopter (22)	honk	idea
helium	hood	if
hello	hoop	I'll
help	hope	I'm
helpless	hoppity-hop	important
hen (9)	horn	impossible
her	horse (9)	in (15)
here	hot	instead
he's	hotel	interest
hide	hound-pup	into
high	hour	invisible
highness	house	iron (26)
hill	how	ironwood

is	lake	librarian
it	lamb	library
its	lamp (26)	lie
I've	land	lifeguard
jackdaw	landlord	lift
jet (22)	language	light (10)
jingle	large	lightening
job	last	like
join	later	lion (16)
juice	laugh	listen
jump	lawn mower (20)	little (10)
just	lay	live
keep	lazy	load
kennel	leak	lock
key	leaned	log
kind	leaped	look
kindness	learn	lost
king	leave	loud (10)
kitchen	left	loudspeaker
kite (19)	leg	love
kitten	lemon (25)	lovely
knock	let's	low
know	letter	lumber
ladder (20)	lettuce (25)	lunch

mad	mill	name
made	mind	napkin
magic	mirror (26)	near
mail	miss	nearby
mailbox	mitten (27)	need
make	money	neighbor
make-believe	monkey (16)	nest
man	moo	never
manage	moon	new
many	more	newspaper
matter	morning	next
may	most	nibble
me	mother	night
mean	mountain	ninety-five
men	mouse (9)	no
merry	mouth	nobody
merry-go-round	move	noise
met	Mr.	nose
meter	Mrs.	not
mew	much	nothing
middle	muff (27)	now
might	mug	number
mild	must	nut
milk (25)	my	of

off (15)	page	pet
often	paid	piano
Oh	pail	pick
oil	paint (4)	picket
old	pan (26)	picnic
on (15)	pancake (25)	picture
once	pant	pie
one	paper (4)	piece
only	parade	pigeon
open	park	pile
or	party	pilot
orbit	pass	pinata
orange (15)	past	pink
organ	paste (5)	pint
other	paw	pipe
our	pay	pitch
out	peanut (25)	place
outside	pedal	plant (23)
over (15)	pencil (1)	play
overlooking	peek	playful
owl (17)	peep	playground
own	penny	please
pack	people	plenty
package	pepper	pocket

pocketbook	pull	ready
poem	puppy	ready-mix
point	purple (15)	real
pole	push	really
policeman	put	receive
pond	quack	remember
pony (9)	quarrel	repeat
pool	quick	return
poor	quiet	ribbon (27)
pop	quite	rich
popcorn	rabbit (9)	ride
popper	raccoon (7)	river
poppy	race	road
post	radio (26)	roar
postman	raft	robin
potter	rain	rock
pour	raindrop	rocket
present	rain-maker	rode
press	ran	rodeo
pretty (10)	ranch	roll
print	rattle	roller skate
prize	rattle-bang	roof
proud	reach	room
puddle	read	rope (20)

round	screen	shore
row	sea	short (10)
rub	second	shot
rubber (27)	secret	should
run	see	shout
rustle	seed	shovel (20)
sad	seem	show
sack	seesaw	shy
said	sell	sit
sailboat	seven	skate (22)
salad	shall	ski
salt	shape	skunk (17)
same	shave	sky
sand	she	sled
sang	shed	sleep
sandwich (25)	shelf	slid
sat	sheep (9)	slow (10)
Saturday	shine	small
sausage (25)	shiny	smart
saw (20)	ship (22)	smell
say	shoe (27)	smile
scare	shoemaker	snail
scarecrow	shop	snowman
science	shopkeeper	snow storm

so	sprinkler	story
sock (27)	square	stove (26)
socket	squash (25)	straight (10)
sofa (26)	squeeze	strange
soft (10)	squirrel (17)	straw
some	stairs	strawberry (25)
somebody	stand	stream
something	star	street
soon	stare	stretch
sort	starfish	strike
sound	start	string
soup	station	stroke
space	stay	such
spark	steam	suddenly
spatter	steam shovel	suds
spend	step	sugar
spider	stick	suit (27)
spill	still	suitcase
splash	stir	summer
sponge	stone	sun
spoon (26)	stood	sunrise
spot	stop	supper
spout	store (24)	suppose
spring	storm	sure

surprise	that	thump
swan (9)	that's	ticket
swim	the	tied
swing	their	tiger (16)
swirl	them	time
table (2)	then	tin
tail	there	tiny
take	these	to
talk	they	toddle
tall (10)	they'll	together
tape	thief	told
taste	think	tomato (25)
teacher	third	tomorrow
tease	this	tongue
teeth	thistle	too
telephone (26)	those	took
tell	though	toothbrush
temperature	thought	top
tent (24)	thoughtless	torn
terrible	three	toward
than	threw	town
thank	through	toy (19)
thankful	throw	track
thanks	thumb	tractor (20)

traffic	twenty	wag
train (22)	twice	wagon (19)
tra-la-la	twin	wait
trap	twirl	walk
traveler	two	wall (5)
treasure	two-wheeler	wallet (27)
treat	umbrella (27)	want
tree (23)	ugly (10)	warm
triangle	uncle	was
trick	under (15)	wash
tricycle (19)	unhappy	washing machine
trip	untie	watch (27)
trotted	until	water
trouble	up	watermelon (25)
truck (22)	us	wave
true	use	way
truth	velvet	we
try	very	weather
tub	village	wee
tumble	vinegar	week
turkey (9)	visible	weigh
turn	visit	well
turtle (17)	voice	we'll
TV	vote	went

we're	winter	yell
were	wire	yellow (15)
wet	wish	yes
what	with	you
what's	wobble	you'll
wheat (23)	wolf	your
wheel	woman	yourself
when	wonder	you've
where	wonderful	zebra (16)
which	won't	zero
while	wood	zoom
whirl	woodcutter	
whisper	woof	
whistle (19)	word	
white (15)	wore	
who	work	
why	world	
wife	worry	
wild	would	
will	wrap	
win	write	
wind	wrong	
windmill	yard	
window (5)	yarn	