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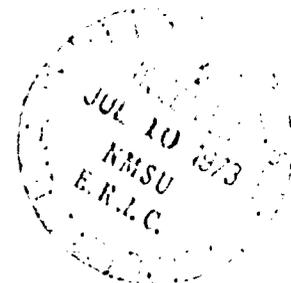
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## ABSTRACT

The major goals of the Responsive Environment Program for Spanish American Children (REPSAC) are early intervention to prevent placement of Spanish American children in special education classes, provision of media and learning activities which enhance and develop a favorable self-concept and attitude toward his own and other cultural groups, and formulation of activities that increase parental interest and involvement in the program and in their child's education. During 1972-73, 30 three-, four- and five-year old low birth weight Spanish American children who reflected such handicaps as physical difficulties, learning aptitude, perceptual and motor problems, language problems, and economic, cultural, and educational deprivation participated in REPSAC at Clovis, New Mexico. The 1972-73 evaluation examined the program's 3 components: instruction, staff development, and community-parent involvement. The evaluation design consisted of comparing REPSAC students with a similar group of children not in the program for learning aptitude, English and Spanish language development, and sensory, perceptual, speech, and psychomotor development using a pretest, posttest, and 2-group analysis of covariance; observations; and interviews. Among the major findings was that REPSAC students made significant gains in Spanish language development and speech development. (NQ)

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OFFICE OF SPECIAL EDUCATION AND  
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U.S. DEPARTMENT OF EDUCATION

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RESPONSIVE  
ENVIRONMENT  
PROGRAM  
FOR  
SPANISH  
AMERICAN  
CHILDREN

FINAL EVALUATION REPORT  
1972-73

RESPONSIVE ENVIRONMENT PROGRAM FOR SPANISH AMERICAN CHILDREN (REPSAC)

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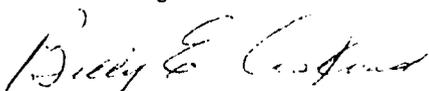
## FOREWORD

The following Final Evaluation Report, prepared by an independent and external evaluation team, is the result of an evaluation study for the 1972-73 school year for the Responsive Environment Program for Spanish American Children (REPSAC). This is the second year-end evaluation report for this program. This report is more lengthy than most evaluation reports. The reason for its length is that much emphasis was placed upon the narrative description of the program (including several appendices) for the benefit of local agencies which have requested such information and for other agencies which may be interested in replicating this program in some fashion.

The function of external evaluation in this program is to design and conduct a procedure necessary for decision making relative to: diagnostic work for the students; student achievement; and component/program development and assessment. Thus, the evaluation team attempts to serve in a role to assist the program to improve rather than simply to prove.

The evaluation team recognizes and hereby expresses appreciation to the director and staff of the program for their excellent cooperation during the evaluation process, especially during the periods of testing the young children. The parents of the children identified as the control group are gratefully acknowledged for their assistance in the evaluation effort.

The invaluable assistance of the various professional and paraprofessional personnel on the evaluation team is also appreciated and acknowledged.



Billy E. Askins  
Coordinator of Evaluation and Research  
Adobe Educational Services (Unit E)  
May, 1973

## ABSTRACT

The Responsive Environment Program for Spanish American Children (REPSAC) serves as early intervention for 3, 4, and 5-year old "high risk" (of low birth weight and with various types of handicaps) Spanish American children living in the area served by the Clovis Municipal Schools, Clovis, New Mexico. REPSAC is a group educational program as contrasted to an individual-clinical project. The program aims at providing successful experiences (using the concept of responsive environment) for Spanish American children in the areas of developing language ability in English and Spanish and in improving cognitive and affective development. The REPSAC program is considered a demonstration project and in developing has drawn heavily upon three experimentally developed models in early childhood education: the New Nursery School; the responsive environment concept; and Project LIFE (Language Instruction to Facilitate Education). Also, the Piaget-Early Childhood Curriculum is used.

### Location and Physical Facilities

The project is located about six blocks southwest of the central business area of Clovis, and the physical facilities blend into the surrounding buildings and are not discernable from the rest of the community except by a sign on one of the houses. The physical facilities of the program consist of two houses with an adjoining yard. One house is used as the main teaching facility which is a renovated former single family dwelling, and the other building serves as office and workroom which is a renovated former beauty shop.

### Target Group

The target group children who participated in REPSAC were thirty 3, 4, and 5-year old low birth weight Spanish American children who were considered educationally handicapped. There were 19 students participating in the program for their second year and 11 were in their first year. The target group reflected a high incidence of various handicaps such as physical difficulties, learning aptitude, perceptual and motor problems, language handicaps, and economic, cultural and educational deprivation. A major selection criterion for participation in the program was low birth weight. Most of the children were below the 5 1/2 pound standard set by the World Health Organization. These handicaps contribute to the educational "high risk" character of the group.

### Major Goals of Program

Major goals of the program include: 1) Early intervention to prevent placement of children in classes for the retarded or other types of special education; 2) Provision of media and learning activities which will enhance and develop a favorable self-concept; 3) Provision of media and learning activities which will strengthen or develop favorable attitudes toward his own and other cultural groups; and 4) Formulation of plans

and activities to increase parental interest and involvement in this program and in the education of their children.

To work toward accomplishing these goals, the program was divided into components and each component had a set of specific objectives. Also, general and specific program objectives were developed.

### Program Activities

To achieve these objectives, the program activities were planned and conducted within the organization of comprehensive program components: instructional; media, staff development; and community-parental involvement. Activities of the major component, the instructional, were divided into group activities (story telling, reading, painting, cutting, manipulative toys, playground activities, and the lunch period) and individualized or small-group activities (Piaget-Early Childhood Curriculum, Project LIFE, Responsive Typing Booth, and Peabody Language Development Kits).

### Evaluation

The external evaluation of the program was performed by an independent team that maintained continuing contact and observation in the program. The evaluation team included psychologists, a speech therapist, bilingual testing personnel, and specialists in early childhood and educational research.

Evaluation focused on three components: instructional, staff development, and community-parental involvement. The evaluation design of the instructional component consisted of comparing the REPSAC students with a similar group of children not participating in the program (control group) in terms of progress or development in six areas/abilities. The six abilities objectively measured were: learning aptitude, language development in English, language development in Spanish, sensory and perceptual development, speech development, and psychomotor development. Also, subjective evaluation was periodically conducted of the self-concept of the REPSAC students. The basic feature of this design was a pretest, posttest, two-group analysis of covariance. Research hypotheses were formulated but were treated in the null form when statistically treated. The difference between the pretest and posttest scores (mean gain score) was the basic unit used in the statistical treatment of the data and subsequent decisions made concerning the hypotheses.

A formative type of evaluation was conducted on the other two components and was conducted within a subjective framework using observations and interviews.

### Findings

Some of the major findings of this report included: REPSAC students made significant gains in language development in Spanish and speech development, and measureable gains, but not statistically

significant, were made in sensory and perceptual discrimination, language development in English, and psychomotor development; REPSAC students developed and maintained a favorable self-image while participating in the program; activities of the staff development component were a well-balanced fusion of theoretical and practical approaches enriched by an obvious concern of the staff for the development of each child in the program; parents of the REPSAC students maintained a positive attitude toward this program; activities of the community-parental involvement component did assist, in varying degrees, in parental involvement; only one child had dropped out of the program in the past two years; and none of the eight former REPSAC students, who just finished the first grade, warranted any type of special education and all performed adequately to be promoted to the second grade.

### Conclusions

Some of the conclusions were: the three components evaluated operated as planned and functioned so as to complement each other; the program is in an active and positive process of accomplishing the long range program objectives; and, in short, the REPSAC program functioned as planned for the target group and parents and in accordance with the approved proposal document during the 1972-73 year. Thus, it was concluded that the REPSAC program is presently serving as effective intervention for the target children.

### Recommendations

Some of the recommendations made by this evaluation team were: that the REPSAC program continue to develop and serve as a demonstration model and as an early childhood intervention program for such target children; that the role of the community-parental involvement component be expanded and that one additional home visitor be added to the staff; and that another comparative base be used in evaluating the instructional component instead of the control group method.

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THE EVALUATION OF EFFECTS OF EARLY EDUCATION INTERVENTION  
FOR "HIGH RISK" SPANISH AMERICAN PRESCHOOL CHILDREN  
(REPSAC): FINAL REPORT FOR 1972-73

This report describes a continuation evaluation study of the Responsive Environment Program for Spanish American Children (REPSAC): 1972-73 being the second full year of its operation.

The major purpose of the REPSAC program is to serve as an effective early educational intervention for three, four, and five-year old "high risk" Spanish American children. Children are considered "high risk" as a result of their low birth weight, 5-1/2 pounds or less, and who will probably have accompanying handicaps as they enter the first grade. This program attempts to demonstrate that such an early intervention can provide such children the experiences necessary to succeed and remain in the educational mainstream. Also, this program is designed to serve as a demonstration model for bilingual and early childhood education for the state of New Mexico as well as for other southwestern states. This program is patterned from three experimentally developed models in early childhood education which are: the New Nursery School; the Responsive Environment Concept; and Project LIFE (Language Instruction to Facilitate Education). In addition, the Piaget-Early Childhood Curriculum is used.

The purpose of evaluation in this program is to establish and maintain a procedure of collecting and providing information to the decision-makers relative to student and program progress. This program is divided into components; therefore, the evaluation design is by component. This

evaluation by component is common in developing new education programs and is referred to as "formative" evaluation as contrasted to a single overall evaluation of the total program referred to as a "summative" evaluation (6, pp. 240-241).\*

This report describing the REPSAC program and the results of evaluation of selected components is organized and presented by sections which are: Context of the Program; Description of the Program; Program Evaluation; Evaluation Results of the Instructional Component; Evaluation Results of the Staff Development Component; Evaluation Results of the Community - Parental Involvement Component; Findings, Follow-Up Studies of Former REPSAC Students; Problems Encountered In Evaluation; and Summary, Conclusions, and Recommendations.

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\* The scientific method of documentation or footnoting is used. The information in the parenthesis refers to the document and page number respectively in the numbered Bibliography located at the end of this report.

## SECTION I

### CONTEXT OF THE PROGRAM

#### Background and Significance of the Program

The development of this program stems from recent research which indicates that children with a very low birth weight generally experience childhood difficulties in the cognitive areas of development which can result in subsequent retardation as they progress through their formal education (3, pp. 532-534; 7, pp. 607-611; 1). Spanish American children with such a low birth weight, coupled with a language different from that used in the American educational setting, have additional handicaps (1).

Further, Spanish American children with the foregoing handicaps whose home environment often does not include toys, materials, games, and media which can enrich their childhood experiences enter the first grade with a notable disadvantage in comparison to children with such advantages (9, pp. 674-675).

The forementioned handicaps frequently prevent Spanish American children from normal advancement in the schooling process, even to the point of often being "mislabeled" and inheriting a stigma which usually dooms them to poor education, poverty, and lack of higher educational and vocational training.

Recognizing that approximately 38% of the school population of New Mexico has a Spanish surname and the low educational level of the

Spanish surname population, and recognizing that a high percentage of "high risk" or low birth weight children come from this particular ethnic group in Clovis (1), a cooperative effort was started between the Clovis Municipal Schools and the U. S. Office of Education which resulted in the planning and implementation of an early intervention program commonly referred to as REPSAC.

The REPSAC program officially started in September, 1971 with 32 students; thus, the 1972-73 academic year is the second year of operation. Initially, REPSAC was funded by Media Services and Captioned Films, Division of Educational Services, Bureau of Education for the Handicapped, U. S. Office of Education. In November, 1972, the source of funding was transferred to the Handicapped Children's Early Education Program, Bureau of Education for the Handicapped, U. S. Office of Education.

There are very few effective early childhood education programs in the Southwest and few, if any, bilingual early childhood programs (not to mention an intervention program where low birthweight is a major selection criteria); therefore, this program is designed to provide or serve as a demonstration model for bilingual and early childhood education for the state of New Mexico as well as for other southwestern states.

#### Area Served and Locale of the Program

The area served by this program is the total attendance area served by the Clovis Municipal Schools, Clovis, New Mexico. The site location

is 420 West Grand Avenue, a few blocks southwest of the central business area of the city. This locale is in the section of town where there is a high concentration of the "target group" children.

#### The Target Group Children

The "target group" or the children who participated in this program was 30 three, four, and five-year old low birth weight Spanish American children who are considered educationally handicapped. This target group comes from the area served by the Clovis Municipal Schools. The school population of Clovis is about 21% Spanish American as compared to the city population which is estimated to be approximately 25% Spanish American.

#### Criteria for Selection of Participants

The selection criteria for the REPSAC project were proposed by a group of consultants appointed by the Bureau of Education for the Handicapped, United States Office of Education, in August, 1970. Based on the knowledge and research background of the consultants, criteria were selected and given a priority ranking. These include: 1) low birth weight; 2) health history; 3) level of education of the parents; 4) educational attainment of siblings; 5) home language, and 6) disadvantaged: low family income plus other factors which constitute this condition. The criterion of low birth weight was the primary factor in the selection of the participants. Other factors were weighted 5, 4, 3, 2, 1.

#### The Experimental and Control Groups

For evaluation purposes, it was decided to have two groups of

children. One group was referred to as the "Experimental Group" and the other as the "Control Group." The experimental group was the children who actually participated in the activities of the REPSAC program. The children serving as the control group did not participate in any way in the program, other than pre and posttesting, as they served as a comparative base. An attempt was made to apply the same criteria in selecting participants for both groups.

#### The Experimental Group

There were 30 students (19 girls and 11 boys) who participated in the REPSAC program for 1972-73. Eighteen of these children were in the program for their second year. It is noteworthy to point out that only one child has dropped out of the program in two years and this was because his parents moved from Clovis.

Background Data. Some pertinent background data on the REPSAC students are included in Table I. This includes such background factors as: education of parents; dominant language used in the home; family status and size; monthly income; and birthweight. The source of this information was the "Student Information Sheet" obtained from the Project Director.

#### The Control Group

The control group for this program year started with 17 children (9 girls and 8 boys), and 8 of these children participated as members of the control group for their second year. At the end of the year, the control group decreased to 14 children (7 girls and 7 boys), and

7 of these children participated as members of control group for their second year. At the end of the year, three children could not be located.

There was some problem in locating children to participate in the control group (this problem is described later in this report); however, the children and parents who finally were located to participate appeared to be very enthusiastic about the experience. A copy of the letter which was given to the parents of the control group children explaining their role in the program is listed as Appendix A.

The children in the control group were brought to the program site by the liaison employee and were administered the same tests as the experimental group. The one exception was the Walker Test which was used solely for diagnostic purposes for the REPSAC students.

Background Data. Some background data on the children in the control group are reflected in Table 1.

TABLE 1

## BACKGROUND DATA FOR REPSAC AND CONTROL STUDENTS

Background Factor	REPSAC		Control	
	<u>Mother</u>	<u>Father</u>	<u>Mother</u>	<u>Father</u>
Education of Parents				
Grade School	25%	48%	45%	45%
Jr. High	21%	15%	18%	18%
Some High School	43%	22%	27%	10%
H.S. Graduates	11%	15%	10%	27%
Dominant Language Used in Home				
English	14%		33%	
Spanish	14%		33%	
Both	72%		33%	
Family Status (Parents at Home)				
Two	77%		81%	
One	23%		19%	
Family Size (No. of Children)				
0-2	17%		20%	
3-5	50%		40%	
6-8	20%		30%	
9-11	13%		10%	
Income (Monthly)				
0-100	.04%		0%	
101-200	22%*		33%*	
201-300	15%		33%	
301-400	26%		11%	
401-500	19%		22%	
over 500	15%		0%	
Birth Weight				
Less Than 4 lbs.	17%		18%	
4-0 to 4-8	10%		.06%	
4-9 to 4-15	.07%		12%	
5-0 to 5-8	47%		24%	
over 5-8	20%		41%	

\* Primarily Welfare Recipients

### Incidence of Handicapping Conditions

The REPSAC program, as an educational intervention, is concerned with handicapping conditions which effect the educational process. This includes both specific conditions and more general cultural and economic conditions which are related to educational development. Some of the handicapping conditions detected and identified in the operation of the program this year, for both the experimental and control students, are described in the categories of: Low Birth Weight; Economic Deprivation; Educational Deprivation; Physical; Language; and Learning Aptitude.

#### The Experimental Group

The 30 children participating in the REPSAC program (experimental group) for this year reveal a much greater incidence of handicapping condition of various types than would be expected in a random sample drawn from the same age groups. As previously stated, the handicapping conditions of the students are described in the categories of: Low Birth Weight; Economic Deprivation; Educational Deprivation; Physical; Language; and Learning Aptitude. A summary of the data concerning the various single handicaps is presented in Table 2. Following Table 2, there is a further description of the various categories of the handicapping conditions.

TABLE 2  
SUMMARY DATA OF INCIDENCE OF SINGLE HANDICAPPING CONDITIONS  
REPSAC (Exp. Group) Students, 1972-73

<u>Handicap*</u>	<u>Incidence</u>	<u>Measure</u>
Low Birth Weight	80%	Birth and Hospital Records applied to WHO standard
Economic Deprivation	73%	Parental Response
Education Deprivation	60%	Parental Response
Physical	23%	Staff Observation
Visual Perception	60%	Clinical Test (Frostig)
Speech	33%	Clinical Test (Templin-Darley)
Home Language	87%	Parental Response
Language - English	77%	PPVT - English
Language - Spanish	87%	PPVT - Spanish
Learning Aptitude	33%	Hiskey Test (Pre-Test)

\*LEGEND

Birth Weight	5 1/2 pounds or less (WHO standard)
Economic	Annual income below poverty level, adjusted for family size.
Educational	Father (or single parent) has no formal education beyond junior high school.
Physical	Clinician's or medical report
Visual	Scores below 35% on <u>Frostig Test of Visual Perception</u> .
Speech	Clinical observation of response to <u>Templin-Darley Test</u> .
Home Language	Language most often used in the home was Spanish or use of both languages in about the same amount.
Spanish <u>PPVT</u>	MA score one year or more below chronological age on <u>Peabody Picture Vocabulary Test</u> .
English <u>PPVT</u>	MA score one year or more below chronological age on <u>Peabody Picture Vocabulary Test</u> .
Learning Aptitude	Scores of less than 85, or slow learner range on <u>Hiskey Test</u> .

Low Birth Weight. One of the primary concerns of the REPSAC program is the low birth weight of the children involved. The World Health Organization has established a standard of 5 1/2 pounds for the identification of low birth weight. As indicated in Table 2 , 80% of the children in the program are of low birth weight according to the WHO standard. The source of this information was birth and hospital records.

If another frequently used standard of 6 pounds is used for the standard of identification of low birth weight, only two of the experimental children and three of the control group would have exceeded this measure. Application of either standard indicates that the incidence of low birth weight is much higher than would be expected in an unselected group of the population.

Low birth weight is assumed as a potential handicap in educational development for certain groups of people. It is also assumed that low birth weight is related to a greater incidence of other handicapping conditions. There is evidence that low birth weight is more prevalent among non-whites than whites and that it is possibly related to nutritional and to economic status or condition of the family.

Economic Deprivation. Recognition that economic conditions are related to educational handicaps is extensive. In determining the economic condition of the families involved, the figures for 1973 as established for federal programs were used. For non-farm families of four, the annual poverty-level income has been established at \$4,200. The effect of additional dependents was considered through allowances for each additional member. As indicated in Table 2 , 73% of the children in the program experience this

condition. The source of this information was parental response as indicated on the student's "Application Form to Enter the REPSAC Program."

Family size is, of course, related to economic conditions and, in several cases, point to severe difficulties. Eighty percent of the families in this group have more than four family members with more than a third of all the families having nine members or more. Both parents are present in all but five of the families; however, an attempt was made to determine total family income in cases in which both parents worked.

Educational Deprivation. Economic conditions have also been established as being related to education. Some indices rate social position or status through use of the education of the father as a factor. Lack of education of the parents is seen as a handicapping condition for educational development. The level of education achieved in terms of school years was determined for the father, if present, or for the mother if she was the single parent in the home. As indicated in Table 2, 60% of the children in the program experience this handicap. The source of this information was parental response as indicated on the "REPSAC Application Form."

The criterion used for estimation was arbitrarily set that the father (or single mother) did not attend school past the junior high school level. Only three of the fathers would have met a criterion of high school graduation.

Physical. Other general conditions related to educational development include those in the physical area. Since this is an educational program, only gross deficiencies were noted. Physical examinations by a

pediatrician might well have revealed other conditions. As indicated in Table 2 , 23% of the children in the program have a physical handicap; 60% have a visual perception handicap; and 33% speech handicap. The source of this information was observations from: the staff and evaluation team members; test results from the Developmental Test of Visual Perception - Frostig; and test results from the Templin-Darley Test of Articulation.

Illustrative of the types of gross physical problems noted for the different children were: apparently severe visual impairment, foot turned inward, mild convulsive tendencies, deformed breastbone, extreme hyper-activity, and extreme frailty. In addition, conditions such as clinically observed emotional disturbances and tendencies to withdraw beyond normal limits were reported by the psychologist during the early weeks of the year. The speech pathologist also reported at least three cases of severe speech problems.

Language. Children whose first language is not English are often handicapped in beginning school activities. There is a growing body of literature which relates the influence of culture upon language and the interrelationship of the two. When the child appears to be dominant in a language other than English or uses two languages in the home setting, he may be classified in the educationally handicapped group as a general-ity, although there may be individual exceptions. The usual case in situations in which the family indicates that both English and Spanish are used is that the young child has limited facility in both languages. This is confirmed by language testing as well as teacher observation. In

parental interviews (conducted in Spanish for those who appeared to be more comfortable in Spanish), the general language pattern of the home was developed. If the response indicated use of both languages to about the same degree or predominant use of Spanish, it was classified as a handicapping condition. As indicated in Table 2 , 87% of the children in the program experience this condition. Source of this information was parental responses as indicated on the "REPSAC Application Form" and test results from the Peabody Picture Vocabulary Test.

The evaluation team recognizes that cultural differences are likely to cause a negative impact on test scores, particularly when the measures were developed for groups of children in settings quite different from the present experimental situation. Nevertheless, some norm referenced tests lend themselves to use as a confirming mechanism and for illustration of change over the treatment or intervention period.

One such measure of language was made through the Peabody Picture Vocabulary Test. This test was repeated from the previous year and has been used extensively in both English and Spanish in the Southwest. The standard English measure and regionally adapted Spanish version were used. The findings as related to language growth are not developed here; rather, this information is used to show function handicaps in language which exist. It is estimated that a mental age score of one year or more below chronological age would reflect a functional difficulty and might be classified as a handicap in a usual educational setting. Using this standard, 77% of the children have a language handicap in English and 87% have a language handicap in Spanish.

Learning Aptitude. In further evidence of educational handicaps, another formal measure is reported. Although it contains the usual limitations for norm referenced tests, the test of academic aptitude used is administered individually by a qualified clinician and requires little or no verbal response. The measure, Hiskey-Nebraska Test of Learning Aptitude, was used in the program during the previous year and appears to be concerned with factors which relate to educational achievement.

The results of the subtests are combined to provide an IQ score through which some general comparisons can be made. It is cautioned that the IQ derived for children of this group and age may be unrealistic in terms of potential attitude, but it does provide functional information. An indication in Table 2, 33% of the children have this handicap. The source of this information was test results from Hiskey-Nebraska Test of Learning Aptitude and the Readiness Test for Disadvantaged Children.

While it is not the purpose of this section to consider significance of differences or program impact, it is noteworthy that 19 of the experimental group are in their second year of the program and that only 4 of that group (21%) scored below the standard (within the slow learning range) while more than half of the first year group did so.

The IQ range of the first year group, like that of the group pre-tested last year, was both lower and more narrow than might have been expected for an unselected group. While the lower limit raised only slightly from last year, the upper score of the second year group has increased notably.

The information related to IQ is available only to the evaluators and the Project Director so as not to prejudice those who work with the children routinely and to prevent labeling of the children. The findings of the narrow range and generally lower scores confirm the educational handicaps of the experimental group.

Multiple Incidence of Handicapping Conditions. Perhaps more important than identification of the incidence of single handicapping conditions is the incidence and seemingly interrelatedness of multiple handicapping conditions. Table 3 illustrates a categorization of handicapping conditions of individual subjects. The range of existing handicaps was 3 to 10 while the average number for the group was 6 for the ten categories listed.

TABLE 3  
 SUMMARY DATA OF MULTIPLE INCIDENCE OF HANDICAPPING CONDITIONS\*

Subject	REPSAC (Exp. Gr.) Stud-nts, 1972-73									
	Birth Weight	Economic	Educational	Home Language	Span PPVT	Engl PPVT	Hiskey IQ	Physical	Visual	Speech
1.	X		X	X		X		X	X	X
2.		X	X	X	X	X	X	X	X	X
3.	X	X		X	X	X				
4.	X	X	X		X	X	X	X	X	X
5.	X	X	X	X	X	X				
6.		X		X	X	X		X	X	
7.	X	X	X	X	X	X	X	X	X	X
8.	X	X	X	X	X	X		X	X	
9.	X		X	X	X	X		X	X	
10.	X		X	X	X	X		X	X	
11.	X	X	X	X	X	X	X	X	X	
12.		X	X	X	X	X				
13.		X		X	X	X	X	X	X	X
14.	X	X	X	X	X	X	X	X	X	
15.	X	X	X	X	X	X	X	X	X	X
16.	X	X	X	X	X	X	X	X	X	
17.	X	X	X	X	X	X	X	X	X	
18.	X	X	X	X	X	X	X	X	X	X
19.	X	X	X	X	X	X	X	X	X	X
20.	X	X	X	X	X	X	X	X	X	X
21.	X	X	X	X	X	X	X	X	X	X
22.	X	X	X	X	X	X	X	X	X	X
23.	X	X	X	X	X	X	X	X	X	X
24.	X	X	X	X	X	X	X	X	X	X
25.	X	X	X	X	X	X	X	X	X	X
26.	X	X	X	X	X	X	X	X	X	X
27.	X	X	X	X	X	X	X	X	X	X
28.	X	X	X	X	X	X	X	X	X	X
29.	X	X	X	X	X	X	X	X	X	X
30.	X	X	X	X	X	X	X	X	X	X

\* See Legend for Table 2

### The Control Group

The purpose of the control group was to have a comparative base for evaluation for certain areas or components of the program. These students were not associated with the REPSAC activities in any way other than participating in the pre and posttesting functions.

A check was made to determine that the control group was in fact similar to the experimental group. Although records for some of the children were incomplete, it was found that for the control group at least 59% registered low birth weights, 47% economic deprivation, 37% educational deprivation, and 65% have language handicaps. These findings are believed to be conservative and that even greater incidence of handicapping conditions would be recorded for the control group if the same level of cooperation could be developed for parents of the control group as exists for the experimental group.

### Physical Facilities of the Program

The program is located at 420 West Grand which is southwest of the central business area of Clovis. The physical facilities are located on a readily accessible main street in the target area and blends so that the buildings are not discernable from the rest of the community except by a neatly lettered sign on the front of the office building. The physical facilities provide for most program needs without looking like a "school house."

The physical facilities consist of two houses and adjoining yard. One facility consists of a fairly large older house on a corner lot with a relatively modern building, formerly used as a beauty shop,

located immediately to the east. The house was renovated inside as the teaching facility *but the exterior is relatively unchanged*. The remodeling included removing two interior walls to provide large open space for group and individual activities. One room was divided to provide individual teaching cubicles for the Responsive Environment Typing Booth and Project LIFE activities. Another part of that room was fitted with speakers and one-way glass to provide for observation and monitoring. Another room was maintained as a kitchen, serving, and activity area. The remaining room has been utilized as a testing and storage area. The existing bathroom was kept and an additional water outlet was installed. Carpet in areas other than the kitchen and bath completed the changes except for additional heating and electrical (including strategic microphones for monitoring) installations.

The second building, consisting of two rooms and a bath, was renovated as an office. It provides work space for the Director, secretary, home-visitor and shared space for the teaching teams. It has a very small meeting area which is frequently used by staff and visitors.

The two buildings have a common yard, enclosed by a low chain-link fence with a large gate which allows for entrance for loading and unloading children. Some playground equipment, including items such as a sandpile, swings, and a climbing frame are provided.

In summary the evaluation team from many visits during the year, attests to the functional arrangement of the facility, and applauds its relation to the target community and location. The size of the

facility is adequate for the teaching program. It would be advantageous to have additional office space (with some privacy) and dining space, although it is recognized that the possibilities of developing such areas are somewhat remote.

## SECTION II

### DESCRIPTION OF THE PROGRAM

The REPSAC program, a demonstration project, is designed to serve as an effective "educational intervention" for three, four, and five-year old "high risk" Spanish American Children. Children are considered "high risk" as a result of their low birth weight and who will probably have various types of handicaps as they enter the first grade.

For program development, organizational and operational purposes, the program is divided into various components. In developing the REPSAC program and the various components, three experimentally developed models in early childhood education were extensively used. These models were: 1) the New Nursery School concept developed at the University of Northern Colorado by Glen Nimnicht and Oralie McAfee; 2) the Responsive Environment Concept of Omar K. Moore, utilized and evaluated by the Far West Laboratory Model; and 3) Project LIFE (Language Instruction to Facilitate Education) developed by the National Education Association, the U. S. Office of Education, and the General Electric Company. In addition, the Piaget - Early Childhood Curriculum developed by Celia S. Lavatelli is being used for concept development of young children.

Upon completing this program (1-3 years depending upon the child's age at entry), the children will enter the first grade. Follow-up activities, or longitudinal studies are planned for these students as they enter the mainstream of formal education.

The remainder of this section of this report describes the program in terms of: Rationale for the Program; Major Goals of the Program; Personnel; and Components of the Program.

#### Rationale for the Program

The main tenet of the rationale for the development of this program stems from recent research which indicates that children with a very low birth weight generally experience childhood difficulties in the cognitive areas of development which can result in subsequent retardation as they progress through their formal education. Spanish American children with such a low birth weight, coupled with a language different from that used in the American educational setting, have additional handicaps.

Further, Spanish American children with the foregoing handicaps whose home environment does not include toys, materials, games, and media which can enrich their childhood experiences, enter the first grade with a notable disadvantage in comparison to children with such advantages.

Additional information concerning the rationale for this program is further elaborated in Section I pertaining to the background and significance of the program.

#### Major Goals of the Program

The major goals of the REPSAC program include: 1) Early intervention to prevent placement of children in classes for the retarded or other types of special education; 2) Provision of media and learning activities which will enhance and develop a favorable self-concept; 3) Provision of media and

learning activities, and content which will strengthen or develop favorable attitudes toward his own and other cultural groups; and 4) Formulation of plans and activities to increase parental interest and involvement in this program and the education of their children.

Various program components were developed so as to achieve these goals, and each of the components have a set of specific objectives.

#### Personnel

The personnel of the REPSAC program consists of: the director; two teachers; three aides; one home visitor; one secretary; one media consultant; one custodian/bus driver; the Professional Advisory Board; and the external Evaluation Team. The names of these personnel are listed on the cover page of this report. Some duties of some of these personnel include:

#### Director

The director is responsible for the overall development and supervision of the program; development of materials; making contact with the parents, community and civic organizations; planning and conducting in-service training programs; dissemination of information; scheduling of consultants; and a responsibility for preparation of the required reports.

#### Teachers

The two certified teachers have a background in early childhood education. One teacher is of Spanish American descent and the other is Anglo so as to provide authentic language culture models. The teachers and the aides work in a team teaching approach. One-half day of instruc-

tion is conducted in Spanish and the other half in English.

#### Aides

The three bilingual classroom aides are required to meet the requirements for classroom aides as established by the New Mexico State Department of Education. The aides perform various duties under the direct supervision of the certified teachers.

#### Home Visitor

The major responsibility of the home visitor is to attempt to get the parents involved in the educational process of their children. Parents, especially mothers, are encouraged to adapt the activities they use with one child for use with other children in the family. The home visitor is required to schedule regular home visits, and the most of these visits are coordinated with certain aspects of the classroom instruction. The function of the home visitor is more fully described in the Community - Parental Involvement Component of this report.

#### Media Consultant

There is one media consultant who spends approximately one day per week preparing various types of instructional media for use in the program or for dissemination of information.

#### Advisory Board

The purpose of the Advisory Board is to provide the director with guidance and direction of the activities of the program and the development of the various program components. The board consists of individuals who can provide expertise in the fields of special education, early child-

hood education, educational technology, and the Responsive Environment Concept.

#### External Evaluation Team

Another element of the operation of the REPSAC program is external evaluation. The major purpose of the evaluation function is to establish and maintain a procedure of collecting and providing information for decision-making relative to student and program/component progress. The evaluation function is being conducted by Adobe Educational Services which is an independent consultant and service organization. The evaluation function is more fully described later in the report.

#### Components of the Program

For program development, organizational and operational purposes, the REPSAC program is divided into various components which are: Instructional; Media Development; Staff Development; and Community - Parental Involvement. Each of these components have a definite function with specific objectives.

#### Instructional Component

This component is obviously the most important and unique feature of the program. As previously stated, the REPSAC program, especially the Instructional Component, is patterned from three experimentally developed models in early childhood education. These models are: the New Nursery School; the Responsive Environment Concept; and Project LIFE (Language Instruction to Facilitate Education). In addition, the Piaget- Early Childhood Curriculum is used. Thus, this part of the report describing the Instructional Component is divided into the following sub-

sections: Objectives; Organization; Concept of Responsive Environment; Group Activities; Individualized or Small Group Activities; and Schedule of Learning Activities for A Typical Day.

### Objectives

The objectives of this component are as follows:

1. Cognitive/Psychomotor Domain
  - a. To develop the child's conceptual and problem solving ability.
  - b. To develop language ability in both Spanish and English.
  - c. To improve the child's sensory and perceptual discrimination.
  - d. To develop the child's speech
  - e. To enhance the child's psychomotor development.
2. Affective Domain
  - a. To maintain or develop in children a favorable self-image.
  - b. To develop in children a favorable perspective toward their cultural heritage and that of other children.

### Organization

The program has an enrollment of 30 students, and the students are divided into two equal groups. One group attends the morning session from 8:30 a.m. until noon, and the other group attends the afternoon session from noon until 3:15 p.m. The children are transported to/from the project by the little "Yellow Bus."

The children are provided the noon meal which is a hot lunch transported in a mobile server from a public school cafeteria. This meal is planned as a learning activity as the morning group is served prior to leaving school, and the afternoon group is served immediately upon arrival for the afternoon session (2, pp. 25-27).

A part of each daily session is devoted to structured or directed learning activities, and the remainder of the time is devoted to free choice activities. Concepts presented during the structured learning periods are planned to be reinforced during free choice and play activities. The structured learning activities can be generally classified into group activities and individualized or small group activities. Both types of activities are planned and conducted using the "concept of responsive environment."

#### Concept of Responsive Environment

The concept of responsive environment was initially developed by Omar K. Moore as a result of numerous studies of early learning in pre-nursery, nursery, kindergarten, and first grades, where children are in the process of acquiring complex symbolic skills (13, pp. 184). The responsive environment concept can be generally described as a learning setting or environment which facilitates the learning of complex symbolic skills. Such an environment is partly a mechanical system; in part it is a social system; and in part it is a cultural system (13, pp. 218). All parts work interrelatedly. Specifically, a responsive environment is one which satisfies the following conditions (13, pp. 184; 8, pp. 194).

1. It permits the learner to explore freely.
2. It informs the learner immediately about the consequences of his actions.
3. It is self-pacing, i.e., events happen within the environment at a rate determined by the learner.
4. It permits the learner to make full use of his capacity for discovering relations of various kinds.

5. Its structure is such that the learner is likely to make a series of interconnected discoveries about the physical, cultural, or social world.

This concept of responsive environment was later modified or adapted so as to be used in an early childhood bilingual setting. This was accomplished by the New Nursery School in Greeley, Colorado (11). This approach as developed by the New Nursery School is the one commonly used in this program in selecting and conducting the various types of learning activities.

#### Group Activities

The group activities are planned and conducted using the responsive environment concept in a bilingual (Spanish and English) setting. Approximately half of the daily activities conducted in Spanish and the other half in English. When one language is used, the other is employed for reinforcement purposes and to maintain motivation for students of limited bilingual ability. This approach is used in the group activities such as: story-telling; reading; painting; cutting; working in the block area; manipulative toys; playground activities; snacks; and the lunch period activities.

#### Individualized or Small Group Activities and Materials

These activities are also planned and conducted using the responsive environment concept when appropriate. The individualized or small group activities are conducted primarily using the following curriculum materials; Piaget-Early Childhood Curriculum; Project LIFE (Language Improvement to Facilitate Education); Responsive Environment Typing Booth; the Peabody Language Kits; and Other Materials. A brief description of these

materials is presented in the following paragraphs.

Piaget-Early Childhood Curriculum. These materials were developed by Professor Celia Lavatelli and consist of a Piaget designed curriculum drawing upon 22 sets of materials with more than 100 activities in the following areas: classification; number; measurement; space and seriation. The materials stress the use of the child's language and thought processes; therefore, expansion of language and concepts are based on child-initiated talk and activities. These materials are used by all children approximately twice a week.

Project LIFE (Language Improvement to Facilitate Education). These materials were developed by the National Education Association, the U.S. Office of Education and the General Electric Company. These materials consisting of over 300 filmstrips are designed to provide a programmed language system to teach handicapped as well as non-handicapped children. The instructional concept employed by these materials is a systematic approach to assist the child to acquire a functional language system. This is accomplished primarily by the child interacting with specifically designed programmed instructional materials using the machine, the Student Response Program Master. The programmed materials, used in conjunction with the machine, deal with the areas of perception-cognition, thinking skills, and basic vocabulary and language skills. The programs in each area are carefully sequenced so that the child can make satisfactory progress through the various sub-systems in each area, working in an independent manner but in close conjunction with the teacher or

aide and other curriculum materials. The children identified, or needing these materials, use them about three times per week.

Responsive Environment Typing Booth. This typing or learning booth was developed by Dr. Omar K. Moore in Hampton, Connecticut and was later tested in the New Nursery School in Greeley, Colorado. The purpose of this typing booth is to develop problem solving ability and language skills. The booth is used in accordance with the equipment, methods, and materials as developed by the Far West Laboratory for Educational Research and Development. The booth is manned by a teaching aide and equipped with a Smith-Corona 250 Electric Typewriter--large print with a colored keyboard. Activities on the typewriter can be classified into four phases: 1) free exploration; 2) search and match; 3) discrimination, and 4) words and stories. Each student is given an opportunity to use the typing booth for about ten minutes each instructional day.

Peabody Language Development Kits. The Peabody Language Kits is published by the American Guidance Service, Incorporated, and Level #P is used in this program. This material is designed for children whose mental age is in the range 3 to 5 years. Level #P is designed to be effective with kindergarten children who come from economically disadvantaged areas of urban and rural communities. This level of the Kit is designed primarily to stimulate the receptive, associative, and expressive components of oral language development. The Kit stresses an overall oral language development program, rather than specific training in selected psycholinguistic processes. Level #P of the PLDK is contained in two metal carrying cases which include such materials as the:

Teachers Manual (contains 180 "Daily Lessons" which are flexible and can be adapted to local needs); manipulative materials; stimulus cards; visual closure templates; story posters; music cards; sound recordings; and puppets. Each student is given an opportunity to work with the Peabody Language Development Kits approximately 20-30 minutes each day.

Other Materials. Additional instructional materials used include: Captioned Films; Light Table; Autosort Language Arts Program (ALAP); Sadler Social Science Series -"Who Am I?"; and various types of playground equipment.

#### Typical Schedule of Learning Activities

To illustrate how these various activities and materials are used, a Typical Schedule of Learning Activities is listed as Appendix B.

#### Media Development Component

One of the major goals of the REPSAC program is the development of a model curriculum which includes various types of media; therefore; the Media Component is a very necessary element of the program. This component is professionally staffed by a media specialist from Eastern New Mexico University who spends approximately one day per week preparing various types of instructional media for use in the program or for dissemination of information. Some projects completed by this component include: videotape presentations; slide programs; color-sound motion pictures and still pictures in both black/white and color; dubbed sound material for use in cassettes; preparation of various transparencies and various other miscellaneous instructional media. Also, the media specialist repairs audio-visual equipment, provides

advice concerning purchase of media equipment, prepares information for release to news media, and prepares informational brochures.

The Media Component has obviously proven to be a great asset to the operation of the total program.

#### Staff Development Component

Another major element of the REPSAC program is the Staff Development Component. The major objectives of this component are: 1) to help the staff develop their general knowledge of the difficulties encountered in early childhood education in the area of language, bilingualism, and child growth and development; 2) to acquaint the staff with various problems faced in special education such as defects in hearing, vision and speech; 3) to assist the staff to recognize various problems which are unnatural in young children so as to make the necessary referral for assistance; and 4) to assist the staff to become efficient in the use of various media and equipment as used in the Instructional Component.

To achieve these objectives, various in-service activities were provided. A very important element of this component is the training provided the teachers and aides by the New Nursery School of the University of Northern Colorado under the direction of Mrs. Oralie McAfee.

This training program is divided into two parts--on campus formal classroom training and a remote (on-site) in-service training program.

The formal classroom training consists of the staff members going to the New Nursery School on the campus of the University of Northern Colorado for two weeks of intensive classroom training.

The second part of the training program starts as the staff returns

to their classroom duties and simultaneously teach and begin the tasks of the remote in-service training. This consists of completing sixteen lessons which are specifically prepared by the faculty of the New Nursery School. Each lesson or training unit is divided into four learning episodes. One episode of each lesson is on film for the staff member to view and implement into practice in the classroom with the children.

The learning episodes are short and specifically designed to produce an end result which is an observable behavior on the part of the child and/or teacher. The episodes normally are situations in which the teacher is involved because teacher training is a major objective of the program. After completion of each lesson, the necessary forms are completed and sent to the New Nursery School for grading and a critique which is returned to the staff member.

Upon successful completion of the program, five hours credit in early childhood education can be granted through the University of Northern Colorado.

Also, the seminars as provided by the evaluation team (See Diagnostic Work as described in Section III) were used as in-service activities.

#### Community - Parental Involvement Component

One of the major goals of the REPSAC program is: "Formulation of plans and activities to increase parental interest and involvement in this program and in the education of their children." To achieve this goal, as well as some other program objectives, the Community - Parental Involvement Component was designed and developed. The major objective of this component

is to demonstrate that given proper supervision, guidance and training, parental influences can make a marked difference on the child's performance in school.

Much effort is made by the program, such as the work of the home visitors, to assist parents with understanding and practice of underlying principles of child care.

Activities for parental involvement in the REPSAC program include:

1. Regularly scheduled parent conferences on an individual basis with bilingual teachers and the home visitor. These are scheduled in the home as well as at school.

2. Actively soliciting parents' help in the teaching process. This involves reading a story to a child/children, serving snacks, preparing library books for the children to take home, assisting during a party, assisting with field trips and many other activities.

3. Encouraging personal visits to school to serve the activities of their children.

4. Encouraging older siblings in the home to assist target children with stories, etc.

5. Scheduling mothers for weekly work in the classroom.

6. Requesting fathers to assist in needed help at school.

7. Regularly scheduled Parents' Nights are an integral part of the program.

8. Assistance to non-English speaking parents is provided in various situations such as: doctor's offices, interviews, and enrolling older children in the various schools.

9. Provision of public health nurse for sessions on health and nutrition.

10. Providing speech and language consultants for meetings to discuss normal and delayed development and what parents can do to help.

11. Development of a Parent/Child Toy Lending Library for 1972-73.

Community involvement is also a major element of this component. In an effort to get such involvement, informational brochures are sent to all service clubs and organizations in the city. A great deal of support has been provided from these organizations in terms of sponsoring parties for children, providing needed items for classroom use, etc. Additionally, various staff members have been invited to present an overview of the program or discuss specific program components before many of the civic groups, the Board of Education, and at various groups at Eastern New Mexico University.

#### Dissemination of Information

Information concerning the program is disseminated by such means as:

1. Periodic progress reports are made available to the staff, administration, school board, local area news media including Cannon Air Force Base, the State Department of Education, and the U. S. Office of Education.

2. Site visitation by interested individuals and groups.

3. Radio and television interviews with staff, administration, and parents.

4. Discussion of program component activities at various service

meetings.

5. Videotaped programs are made available to explain the program as well as for the use of in-service training for bilingual early childhood education programs.

6. The program engaged the services of student teachers in early childhood education from nearby Eastern New Mexico University and thereby disseminates information through the University.

7. Publication of articles in various professional journals and presentations of papers at various state and national professional organizations. Also, the year-end Final Reports are placed in the Educational Resources Information Center (ERIC).

### SECTION III

#### PROGRAM EVALUATION

An effective evaluation process is a necessary ingredient to REPSAC as the program works to serve the target group and as the program develops into the described model and demonstration project (See Project Goals). The primary purpose of the evaluation function is to establish and maintain a procedure of collecting and providing information for decision-making relative to: 1) diagnostic work for the students; 2) student achievement; and 3) component/program operation and development. Thus, the evaluation function attempts to serve in a way to improve rather than simply to prove.

The REPSAC program is divided into components; therefore, evaluation is conducted by component. This evaluation by component is common in developing new education programs and is referred to as "formative" evaluation as contrasted to a single over-all evaluation of the total program referred to as "summative" evaluation (6, pp. 240-241).

#### The External Evaluator

The external evaluation function of the program is being conducted by Adobe Educational Services, Lubbock, Texas. This is an independent consultant and service organization with its direction primarily through various faculty members of the College of Education, Texas Tech University and the University of Texas at Austin. Names of the evaluation team members are listed on the cover of this report.

#### Summary of Evaluation Design for the Program

A detailed description of the evaluation function including the

evaluation design is described in the approved "Proposal For Continuation of the Evaluation Function of the REPSAC Project for 1972-73," dated July 24, 1972. A summary of the evaluation design is described in the following paragraphs.

As previously indicated, the REPSAC program is divided into components; therefore, the evaluation design is by components. The evaluation of some components must be governed by strict research design while it may be more appropriate to evaluate other components by descriptive or explanatory means.

The evaluation function for this academic year was conducted by:

1. Following the evaluation design for three of the major components of the program which are:
  - a. Instructional
  - b. Staff Development
  - c. Community and Parent Involvement(The evaluation design of these components is described later).
2. Analyzing data collected in the program; subject data, when appropriate, to statistical treatment which includes:
  - a. Providing summaries of data and narrative descriptions of findings.
  - b. Synthesizing case data and individual psychological tests.
  - c. Comparing the second year with the first year program operation which includes a longitudinal analysis of progress of second year children.

3. Providing the Project Director with pertinent feedback information concerning the students for diagnostic purposes. Such data was used in the internal program planning and operation (Instructional Component).

#### Diagnostic Work

As part of the external evaluation function, various types of diagnostic work for the students was performed. The purpose of this diagnostic work is to collect and provide various types of feedback into the internal operation of the program. Such data can serve as a base for subsequent instructional planning and possible program adjustments, mainly in the Instructional Component. Sources and types of activities used in the diagnostic function were: Use of pretest Data; Preparation of Educational Prescriptions; Seminars, and Mid-Year Testing.

#### Use of Pretest Data

The pretest data from the various tests were posted to the student's records ("Individual Student Test Data for 1972-73"). An example of this form is listed as Appendix C. This information was made available to the Project Director and faculty for individual work and planning. Also, data from pretesting was a major source for the preparation of the educational prescriptions.

#### Educational Prescriptions

A short written educational prescription was prepared for each student. This took the form of strength/weakness of each student and a translation of the test results into a recommended educational prescription. An example of an educational prescription is listed as Appendix D.

### Seminars

In addition to the pretest data, observational data, and educational prescriptions, four seminars were conducted during November, 1972-January, 1973 as part of the diagnostic function. These seminars were conducted at the project site by various members of the evaluation team on a consultancy basis. These seminars were also considered as in-service training as part of the Staff Development Component.

The first seminar was conducted by Dr. Eugene Coleman, Professor of Physical Education, on November 20, 1972. The purpose of this seminar was to interpret the students' pretest scores from the Coleman Motor Ability Test and to make suggestions concerning the selections and conducting of physical and play ground activities. Also, a manual was developed containing such information and was presented at this seminar for future reference by the faculty.

The second seminar was conducted by Dr. Charles Jones, psychologist, on December 2, 1972. The purpose of this seminar was to distribute and discuss the educational prescriptions and to make various suggestions as deemed necessary. Also, assistance was provided in the interpretation of the pretest data as recorded on the student records.

The third seminar was conducted by Dr. Leonard Ellis, speech pathologist, on December 15, 1972. The purpose of this seminar was to interpret the pretest scores from the Templin-Darley Test of Articulation and to discuss some corrective measures for some speech problems of the children.

The fourth seminar was conducted by Dr. Charles Jones, psychologist, on January 19, 1973. The purpose of this seminar was to interpret the test results of the Illinois Test of Psycholinguistic Abilities which was primarily used for diagnostic purposes. This test was administered at mid-year.

#### Mid-Year Testing

The sole measure used in mid-year testing was the Illinois Test of Psycholinguistic Abilities which was administered by Dr. Charles Jones, psychologist, during December 11-18, 1972. The purpose for administering this test was solely for diagnostic purposes. As previously stated, interpretation of the test results was presented in the seminar on January 19, 1973.

#### Evaluation Design for Selected Program Components

The main focus of the evaluation design for this year was on three components: Instructional; Staff Development; and Community - Parental Involvement. A brief description of the evaluation design for these components is as follows.

#### Instructional Component

The evaluation design for this component is within a framework of comparing the progress or development in certain areas/abilities of students enrolled in the REPSAC program (experimental group) with that of comparable children not in the program (control group).

The description of the evaluation design for this component is divided into areas which are: Hypotheses to be Tested; Test Instruments Used; Procedure/Time-Schedule for Collecting Data; Statistical Treatment

of Data; and Use of Test Data for Diagnostic Purposes.

### Hypotheses to be Tested

Based upon the objectives of the Instructional Component (See Section II containing the Description of the Program), various questions were formulated to be tested with the collection and interpretation of data. These questions are stated in the form of research hypotheses, but were stated as null hypotheses when statistically treated. These hypotheses are as follows:

1. The REPSAC project for 1972-73 will serve as an effective educational intervention for 3, 4, and 5 year old "high risk" or handicapped Spanish American Children. Evidence of effectiveness will be determined by comparing the experimental group (first and second year students) with the control group using the mean gain scores from standardized tests selected to measure ability in the areas of: learning aptitude (conceptual and problem solving); language ability (Spanish and English); sensory and perceptual discrimination; speech development; and psychomotor development.
  - a. Children participating in the REPSAC project during their first year will show more significant development than comparable children not participating in the project in the areas of:
    - (1) learning aptitude
    - (2) language ability in Spanish
    - (3) language ability in English
    - (4) sensory and perceptual discrimination
    - (5) speech development
    - (6) psychomotor development
  - b. Children participating in the REPSAC project during their second year will show more significant development than comparable children not participating in the project in the areas of:
    - (1) learning aptitude
    - (2) language ability in Spanish
    - (3) language ability in English
    - (4) sensory and perceptual discrimination

- (5) speech development
  - (6) psychomotor development
2. Children participating in the REPSAC project during their first year will maintain or develop a favorable self-image as reflected from the personal profile rating scales.
  3. Children participating in the REPSAC project during their second year will maintain or develop a favorable self-image as reflected from the personal profile rating scales.
  4. There will be a significant correlation between the birth weight of all children (experimental and control) with the mean gain scores on the various test instruments.

#### Test Instruments Used

The test instruments selected to measure the six abilities as referred in the objectives and hypotheses are as follows:

1. Learning Aptitude
  - Hiskey-Nebraska Test of Learning Aptitude
  - Readiness Test for Disadvantaged Pre-School Children,
  - Form A & B (Walker) - Exp. Group only.
2. Language Ability
  - Peabody Picture Vocabulary Test (English)
  - Peabody Picture Vocabulary Test (Spanish)
3. Sensory and Perceptual Ability
  - Developmental Test of Visual Perception (Frostig)
4. Speech Development
  - Templin-Darley Test of Articulation
5. Self Concept
  - Developmental Profiles (Bessell and Palomares)
6. Psychomotor Development
  - Motor Ability for Pre-School Children (Coleman)

A brief non-technical description of each of these tests is listed in Appendix E.

#### Procedure/Time-Scheduling for Collecting Data

The data to evaluate the Instructional Component was collected within the framework of an experimental nonequivalent control group design using pre and posttesting (4). The following tests were used as the pre and posttests for both the experimental and control groups (first and second year students): Hiskey-Nebraska Test; Readiness Test (Form A as pre and Form B as the posttest for the experimental group only); Peabody (English and Spanish); Articulation; Visual Perception; and Motor Ability Test. The pre-testing was accomplished during the first two weeks of the school year, and the posttesting was accomplished during the last two weeks of the school year.

In addition, the Developmental Profiles were completed every six weeks by the two REPSAC teachers: October 13, November 22, 1972; January 12, February 23, April 6, and May 28, 1973. Such a time schedule was necessary for this instrument because of its nature.

#### Statistical Treatment of Data

Hypotheses 1, 1a, 1b, 2, and 3 were treated by single classification analysis of covariance.

The rationale for employing this technique is based on the necessity for equalizing groups prior to measuring change. Since the subjects could not be randomly assigned to experimental and control groups, analysis of covariance provides a way of adjusting the mean gain scores according to the initial differences that may exist between the groups.

The selection of this technique is also based on its compatibility with the type of research design emphasized. In essence, the technique adjusts the mean gain scores by calculating the relationship between the independent and dependent variables and uses this index to arrive at a set of adjusted means. The final comparison, then, is based on these adjusted means rather than the initial treatment means.

Hypotheses 4 was treated using the Pearson Product-moment correlation technique.

The null hypotheses was rejected at the .05 level or greater. A conclusion was drawn and reported based upon these findings.

#### Staff Development Component

The evaluation design of the Staff Development Component was based upon the stated objectives of this component which are listed in Section II in the Description of the Program.

Attainment of these objectives was the criteria for subjectively evaluating this component. Attainment of these objectives was determined by observations at various intervals, discussion with the faculty and staff, and the findings and conclusions are described by narrative or explanatory means in Section V.

The evaluation of this component was done on a consultancy basis by Dr. Doris Webb.

#### Community - Parental Involvement Component

The evaluation design of the Community - Parental Involvement Component was based upon the stated objectives of this component which are

listed in Section V which describes the evaluation results of this component.

Attainment of these objectives was the criterion for subjectively evaluating this component. Information was collected by visitations, observations, and discussions with the home visitor. These means of data collection were designed to gain information concerning the degree of assistance given the child at home, and the degree of satisfaction the parents express concerning their child's involvement in the program.

Analysis of this data is subjective but should provide a directional overview of parental reaction to the project. Section V contains the evaluation results of this component.

The evaluation of this component was done on a consultancy basis by Dr. Leo Juarez.

SECTION IV  
EVALUATION DATA OF THE INSTRUCTIONAL COMPONENT  
Summary of Evaluation Design

The evaluation design for this component was within a framework of comparing the REPSAC students (experimental group) with that of comparable children not in the program (control group) in terms of progress or development in certain areas/abilities. A detailed description of the areas/abilities measured and test instruments used are listed in Section III. The basic features of the design was a pretest, posttest, two-group analysis of covariance. Hypotheses for this component were stated in research form (See Section III); however, they were stated in the null when statistically treated.

Subjects in REPSAC and control were measured at the beginning of the year on six factors: 1) learning aptitude; 2) language ability in English; 3) language ability in Spanish; 4) sensory and perceptual ability; 5) speech development; and 6) psychomotor development. At the end of the year, both REPSAC and control subjects were measured again on the same factors. The difference between the pretest scores and the posttest scores (gain scores) was the basic unit used in the statistical treatment of data and the subsequent decisions made regarding the hypotheses. Since subjects participating in REPSAC and those designated as control were not assigned to groups at random, analysis of covariance, utilizing two pretest scores (the Hiskey and the Frostig) were used as covariates to statistically equate the two groups. The reason for selecting these two factors was

that the two groups differed significantly on them at the beginning of the year.

In addition, gain scores were used to compare performance between first year REPSAC subjects and first year control subjects. Also, gain scores were used to compare second year REPSAC subjects and second year control subjects on the six measures used in the evaluation. These differences were analyzed by use of the t-test.

Hypotheses for all these measures were tested at the .05 level of significance or beyond. That is, the hypotheses were supported only if the probability of the same outcome occurring in repeated measures reached or exceeded 95 out of 100.

Two additional analyses were made. First, self-concept change was measured at five intervals by the two REPSAC teachers. Change was determined by averaging the two ratings and plotting them on a graph. Group change was determined by taking an average of the individual ratings for each of the six areas measured. The second analysis was made regarding the relationship of birth weight of REPSAC and control subjects and performance on the six areas measured. The statistical technique used to determine this relationship was the Pearson  $r$ . As in the other analysis, gain scores were the primary index of performance.

In addition to presenting data to treat the hypotheses, additional information is presented in an effort to describe change. These data include the mean gain score for all tests administered for REPSAC and control students by age.

## Presentation and Analysis of the Data

Hypothesis 1 infers that subjects participating in REPSAC will make significantly greater gains in the six areas measured than control subjects not participating in the program. The data indicate that this hypothesis can be supported for two of the areas measured--speech development and language ability in Spanish--but cannot be supported for the remaining four areas--language ability in English, learning aptitude, psychomotor development, and sensory and perceptual ability. Data relating to hypothesis 1 are presented in Tables 4 and 5.

TABLE 4  
REPSAC AND CONTROL SUBJECTS' GAIN AND COVARIATE MEANS

TEST	GROUPS	N	GAIN MEAN ADJUSTED	COVARIATE MEANS	
				HISKEY (PRETEST)	FROSTIG (PRETEST)
<u>TEMPLIN</u>	REPSAC	30	13.70	90.83	14.87
	CONTROL	14	8.71	73.71	7.47
<u>MOTOR</u>	REPSAC	30	27.03		
	CONTROL	14	27.00		
<u>PEABODY (English)</u>	REPSAC	30	28.43		
	CONTROL	14	21.29		
<u>PEABODY (Spanish)</u>	REPSAC	30	23.73		
	CONTROL	14	4.57		
<u>HISKEY</u>	REPSAC	30	8.23		
	CONTROL	14	8.36		
<u>FROSTIG</u>	REPSAC	30	17.10		
	CONTROL	14	11.29		

TABLE 5

ANALYSIS OF COVARIANCE OF GAIN SCORE PERFORMANCE BETWEEN REPSAC  
AND CONTROL SUBJECTS UTILIZING TWO PRETESTS AS COVARIATES

TEST	SOURCE OF VARIATION	SUM OF SQUARES	d. f.	MEAN SQUARE	F	P
<u>TEMPLIN</u>	BETWEEN	237.27	1	237.27	4.60	.05
	WITHIN	2165.16	42	51.55		
<u>MOTOR</u>	BETWEEN	.02	1	.02	.001	N.S.
	WITHIN	15467	42	368.26		
<u>HISKEY</u>	BETWEEN	.15	1	.15	.001	N.S.
	WITHIN	5421.58	42	129.08		
<u>FROSTIG</u>	BETWEEN	322.39	1	322.39	3.64	N.S.
	WITHIN	3715.86	42	88.47		
<u>PEABODY</u> (English)	BETWEEN	487.66	1	487.66	3.15	N.S.
	WITHIN	6498.23	42	154.72		
<u>PEABODY</u> (Spanish)	BETWEEN	3504.88	1	3504.88	23.21	.001
	WITHIN	6341.30	42	150.98		

As reflected in Table 4, REPSAC subjects exceeded control subjects on all of the measures except learning aptitude in which control subjects indicated a slight advantage. However, as noted in Table 5, when adjusted gain means were treated statistically, only two of the differences were significant -- speech development and language ability in Spanish.

Hypothesis 1a states that subjects participating in REPSAC for the first time will show more gain on the areas measured than first year control subjects. The analysis of data indicate that this hypothesis can be supported for three of the six areas measured -- speech development, language ability in English, and language ability in

Spanish -- but cannot be supported for psychomotor development, sensory and perceptual discrimination, and learning aptitude. These data are presented in Table 6.

TABLE 6  
COMPARISON OF PERFORMANCE BETWEEN FIRST YEAR REPSAC  
SUBJECTS AND FIRST YEAR CONTROL SUBJECTS

TEST	GROUP	N	MEAN GAIN	S	t	P
<u>TEMPLIN</u>	REPSAC	11	20.55	8.63	3.33	.01
	CONTROL	8	9.00	7.14		
<u>MOTOR</u>	REPSAC	11	29.82	11.63	.54	N.S.
	CONTROL	8	26.00	13.81		
<u>PEABODY (English)</u>	REPSAC	11	38.45	13.22	1.96	.05
	CONTROL	8	24.00	15.60		
<u>PEABODY (Spanish)</u>	REPSAC	11	18.09	10.16	7.27	.001
	CONTROL	8	6.75	7.10		
<u>FROSTIG</u>	REPSAC	11	12.55	9.18	1.53	N.S.
	CONTROL	8	7.63	8.73		
<u>HISKEY</u>	REPSAC	11	9.27	5.83	.39	N.S.
	CONTROL	8	7.12	6.12		

As reflected in Table 6, REPSAC subjects participating in the program for the first time exceeded first year control subjects on all of the areas measured; however, in terms of statistical differences, three areas were found to be significant.

Hypothesis 1b infers a comparison between second year REPSAC subjects and second year control subjects. The analysis of data indicate that this hypothesis can be supported for only one area measured -- lan-

guage ability in Spanish. The hypothesis cannot be supported for the remaining five areas. Table 7 presents the data relating to this hypothesis.

TABLE 7  
COMPARISON OF PERFORMANCE BETWEEN SECOND YEAR REPSAC  
SUBJECTS AND SECOND YEAR CONTROL SUBJECTS

TEST	GROUP	N	MEAN GAIN	S	t	P
<u>TEMPLIN</u>	REPSAC	19	9.74	3.91	.57	N.S.
	CONTROL	6	8.33	5.69		
<u>MOTOR</u>	REPSAC	19	25.42	22.31	.29	N.S.
	CONTROL	6	28.33	25.40		
<u>PEABODY (English)</u>	REPSAC	19	22.63	11.85	1.00	N.S.
	CONTROL	6	17.67	13.42		
<u>PEABODY (Spanish)</u>	REPSAC	19	27.00	10.18	6.86	.001
	CONTROL	6	1.67	4.36		
<u>FROSTIG</u>	REPSAC	19	19.74	12.16	1.14	N.S.
	CONTROL	6	16.16	9.31		
<u>HISKEY</u>	REPSAC	19	9.27	6.52	.63	N.S.
	CONTROL	6	11.17	9.11		

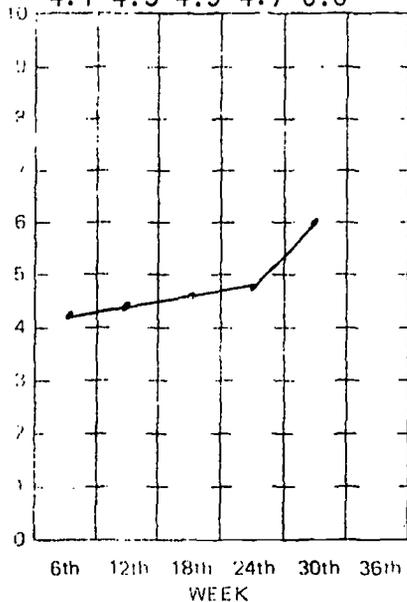
Tables 8, 9, and 10 present the results of the self-concept measures for all REPSAC subjects and for first and second year participants (Hypothesis 2 and 3). As reflected in these tables, positive and continuous growth was made by subjects participating in the program. In terms of growth, first year subjects appear to have made the most progress. These scales are, of course highly subjective in nature and should be interpreted with caution.

TABLE 8  
PERSONAL DEVELOPMENT PROFILE FOR REPSAC STUDENTS

**AWARENESS**

(1) AWARENESS OF SELF

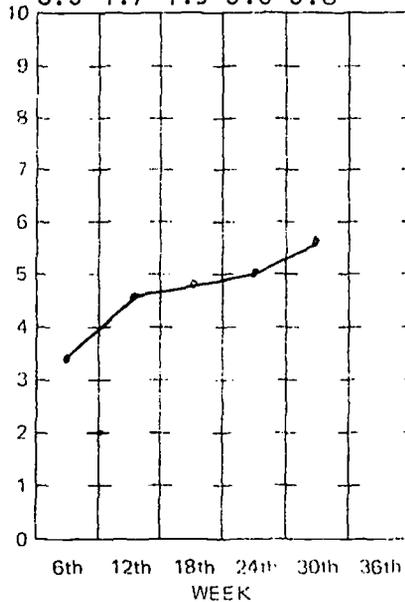
4.1 4.3 4.5 4.7 6.0



**MASTERY**

(1) SELF CONFIDENCE

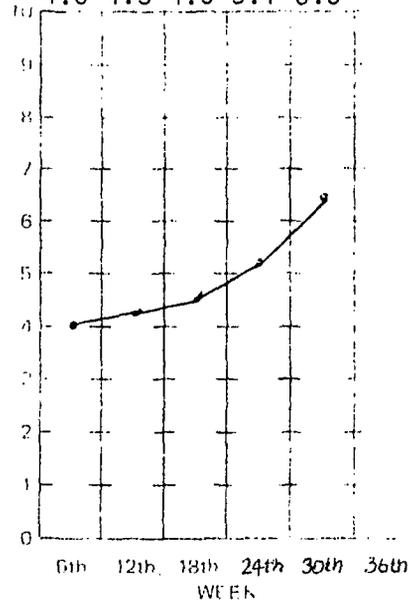
3.5 4.7 4.9 5.0 5.8



**SOCIAL INTERACTION**

INTERPERSONAL  
(1) COMPREHENSION

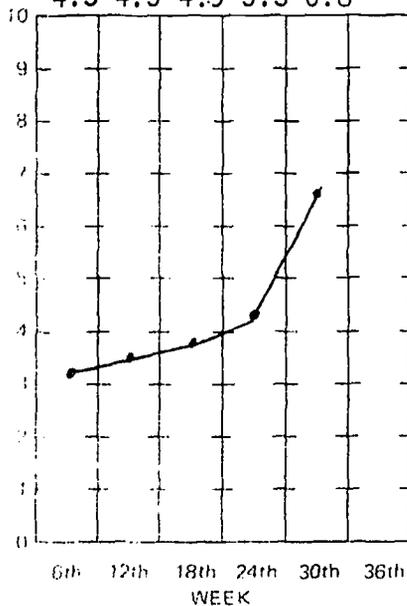
4.0 4.3 4.5 5.1 6.5



**AWARENESS**

(2) SENSITIVITY TO OTHERS

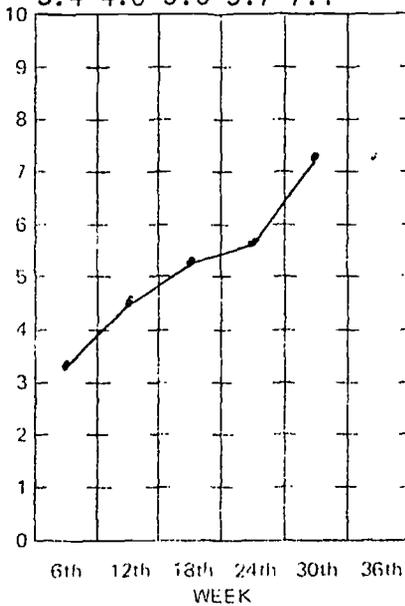
4.3 4.5 4.9 5.3 6.8



**MASTERY**

(2) EFFECTIVENESS

3.4 4.6 5.3 5.7 7.1



**SOCIAL INTERACTION**

(2) TOLERANCE

4.1 4.6 5.2 5.8 6.9

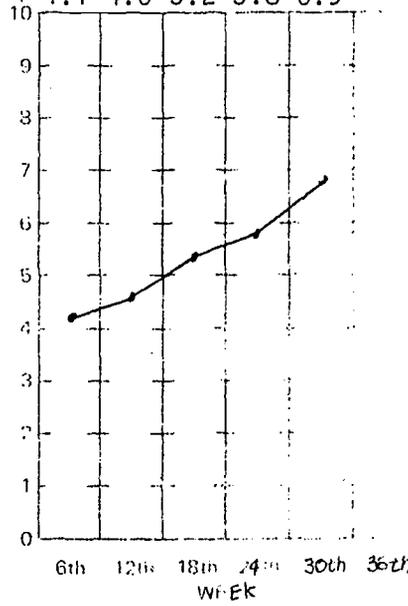


TABLE 9

## PERSONAL DEVELOPMENT PROFILE FOR FIRST-YEAR REPSAC STUDENTS

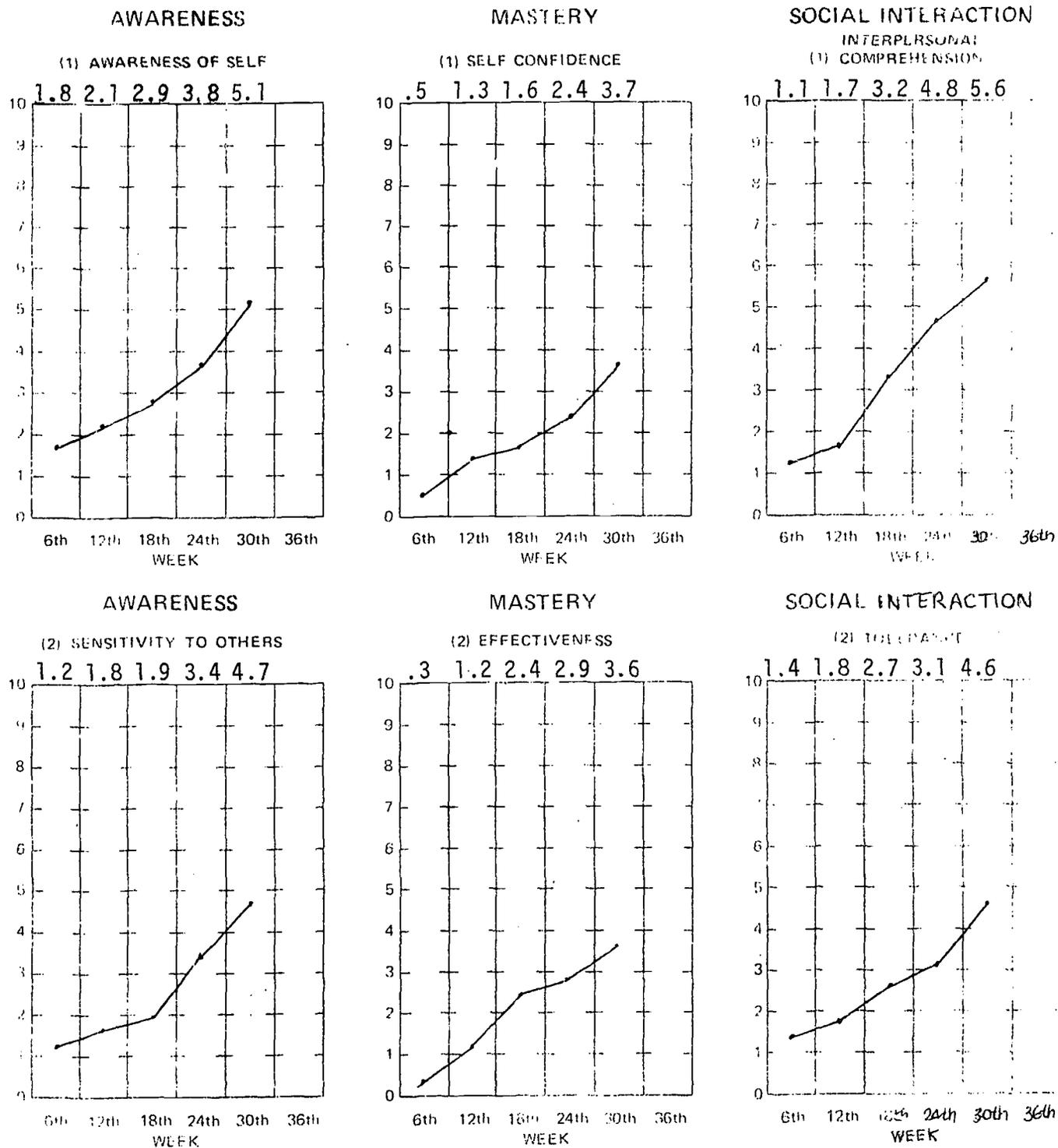
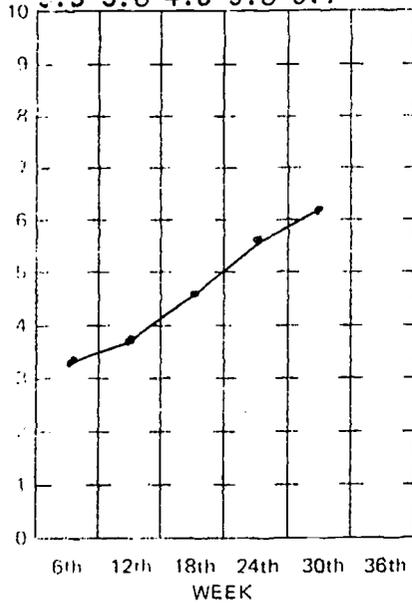


TABLE 10  
 PERSONAL DEVELOPMENT PROFILE FOR SECOND-YEAR REPSAC STUDENTS

**AWARENESS**

(1) AWARENESS OF SELF

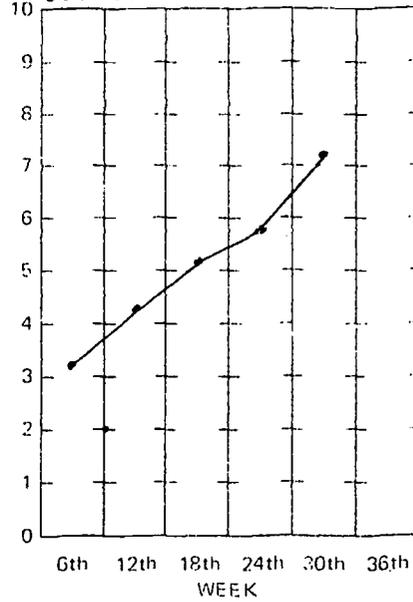
3.3 3.8 4.6 5.8 6.1



**MASTERY**

(1) SELF CONFIDENCE

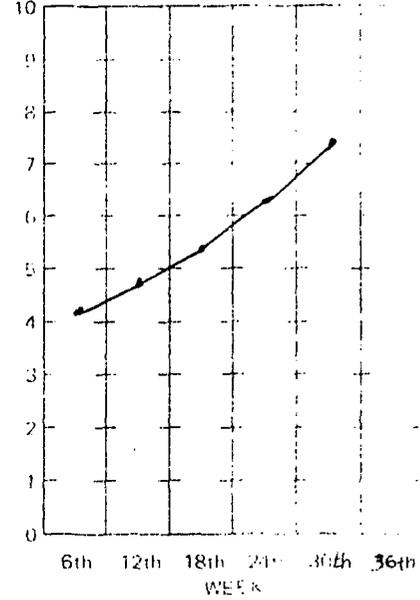
3.1 4.3 5.1 5.9 7.2



**SOCIAL INTERACTION**

INTERPERSONAL  
 (1) COMPREHENSION

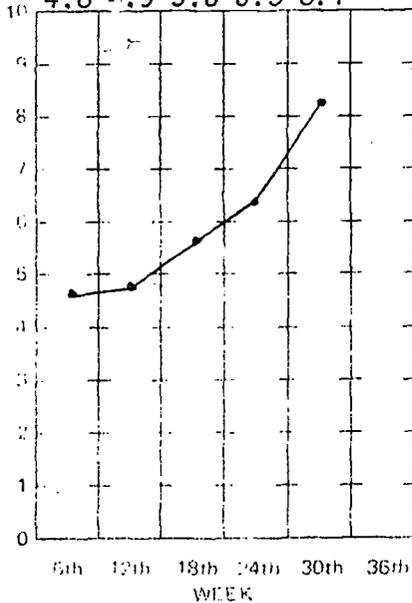
4.1 4.8 5.3 6.2 7.3



**AWARENESS**

(2) SENSITIVITY TO OTHERS

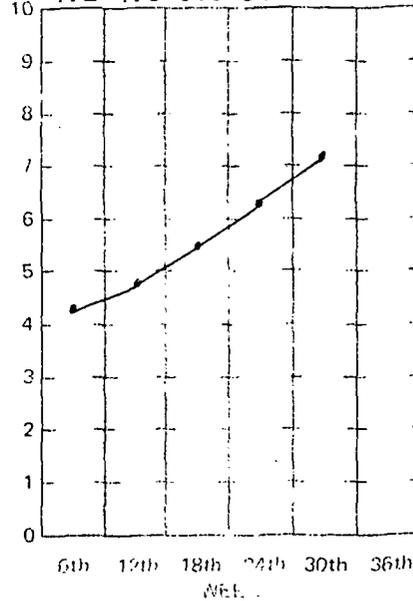
4.8 4.9 5.6 6.3 8.1



**MASTERY**

(2) EFFECTIVENESS

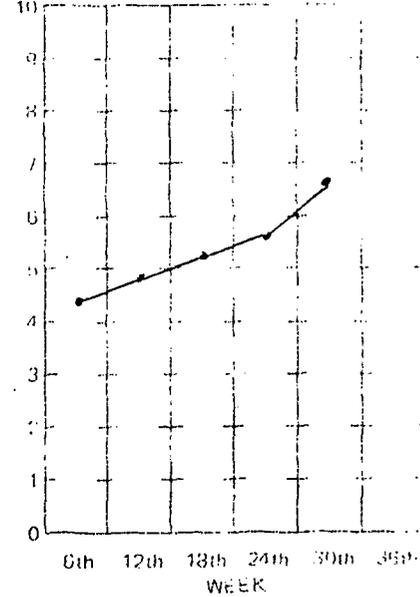
4.2 4.8 5.6 6.3 7.1



**SOCIAL INTERACTION**

(2) TOLERANCE

4.4 4.9 5.1 5.6 6.8



Hypothesis 4 sought a decision regarding the relationship between birth weight of REPSAC and control subjects and mean gain scores on the six areas measured. As reflected in Table 11, the Pearson  $r$  correlations ranged from  $-.69$  for speech development to  $+.22$  for psychomotor development. The only significant correlation found was the  $-.69$  between birth weight and speech development; therefore, the hypothesis as stated cannot be supported with the exception of speech development.

TABLE 11  
RELATIONSHIP OF BIRTH WEIGHT AND SUBJECTS' GAIN SCORES ON  
SELECTED TESTS

TESTS	$r$	P
<u>TEMPLIN</u>	$-.69$	.001
<u>MOTOR</u>	.22	N.S.
<u>WALKER</u>	.07	N S.
<u>PEABODY</u> (English)	.06	N.S.
<u>PEABODY</u> (Spanish)	.10	N.S.
<u>FROSTIG</u>	.13	N.S.
<u>HISKEY</u>	$-.28$	N.S.

Caution should be exercised in the final analysis and conclusion of the evaluation results of the Instructional Component where comparisons are made to the control group. The evaluation team had reservations about the size and composition (background factors) of the control group even though the two groups were statistically equated (analysis of covariance).

In addition to presenting data to treat the hypotheses of the Instructional Component, additional data are reported solely for informational purposes. This information is the mean gain score of all tests for first and second year REPSAC students by age. These data are presented in Table 12. Table 13 presents the gain score of the tests for first and second year control subjects by age.

TABLE 12

MEAN GAIN SCORE OF ALL TESTS FOR FIRST AND  
SECOND YEAR REPSAC STUDENTS BY AGE

Year In Program	Age*	N	TESTS					
			Templin	Motor	PPVT-Eng.	PPVT-Sp.	Frostig	Hiskey
First Year		(11)	20.55	29.82	38.45	18.09	12.55	9.27
	3	8	20.00	32.38	35.63	14.75	13.25	10.50
	4	3	22.00	25.00	42.00	23.00	11.00	8.37
	5	0	-	-	-	-	-	-
Second Year		(19)	9.74	25.42	22.63	27.00	19.74	7.63
	3	0	-	-	-	-	-	-
	4	6	12.67	21.00	24.00	19.17	19.33	7.17
	5	13	6.97	29.50	20.71	37.02	20.13	8.12

\*- Age at the beginning of the program year.

TABLE 13

MEAN GAIN SCORE OF ALL TESTS FOR FIRST AND  
SECOND YEAR CONTROL STUDENTS

Year Used As Control	Age*	N	TESTS					
			Templin	Motor	PPVT-Eng.	PPVT-Sp.	Frostig	Hiskey
First Year		(8)	9.00	26.00	24.00	6.75	7.63	7.12
	3	4	7.75	24.50	22.50	2.75	2.25	7.00
	4	4	10.25	27.50	25.50	10.75	13.00	7.25
	5	-	-	-	-	-	-	-
Second Year		(6)	8.33	28.33	17.67	1.67	16.16	11.17
	3	-	-	-	-	-	-	-
	4	2	9.00	40.50	14.00	2.50	10.50	3.00
	5	4	7.73	16.75	20.16	1.21	19.00	15.25

\*- Age at the beginning of the program year.

## SECTION V

## EVALUATION DATA OF THE STAFF DEVELOPMENT COMPONENT

## Summary of Evaluation Design

A formative type of evaluation design was used to evaluate this component; therefore, attainment of the objectives of this component was the criterion for subjectively evaluating the component (See Section III).

## Observations

Periodic visits to the REPSAC program indicated that staff development has proceeded according to the guidelines and objectives as described by the Director in September: These objectives were: 1) Assisting the staff to develop their general knowledge of the difficulties encountered in early childhood education in the areas of language, bilingualism, and child growth and development. 2) Acquainting the staff with various problems faced in special education; such as defects in hearing, vision, speech pathology, and mental retardation. 3) Assisting the staff to recognize various problems which are often unnatural in young children so as to make necessary referral for assistance.

The continuing use of the training approach to the New Nursery School of the University of Northern Colorado has enabled teachers and aides who have completed their program to introduce new staff members to the techniques and materials used in the projects.

Seminars were conducted to familiarize staff members with special needs and problems of individual children (See Section III). Dr. Charles

Jones, psychologist, conducted sessions in the fall and again at mid-year in which he interpreted the test protocols of each child and offered teaching suggestions for utilizing strengths to offset revealed weaknesses. Two other seminars were conducted by Dr. Leonard Ellis, speech pathologist, and Dr. Alfred Coleman, specialist in physical education. Dr. Ellis discussed speech problems of various children and the significance of such problems in a child's development. Dr. Coleman offered suggestions for physical education, identifying levels of development and activities appropriate for each developmental stage.

Teachers attended a week's workshop in Silver City, which included experiences in microteaching and self-evaluation. One teacher who attended an institute in cultural awareness shared many of her experiences and insights with other staff members and trained them in dances and customs which were incorporated in the Christmas festival. Parents of the REPSAC children and other members of the community shared in these activities.

Changes in staff personnel appear to have been accomplished with a smooth transition. The ongoing staff inservice training served to bridge the gap for new personnel in orienting them as to the objectives and the use of curricular materials. All personnel appeared concerned for the difficulties encountered by the children and were aware of the needs of individual children. The fact that these staff attitudes have been maintained successfully during the program since its inception may be due in no small part to the fact that the Staff Development Component is an integral part of the ongoing total program, rather than being perceived as supplementary activities for the staff.

### Suggestions

The following suggestions may prove helpful in maintaining the high level of REPSAC performance:

1. Continuing the training approach of the New Nursery School, which has proved successful in establishing an effective curriculum.
2. An extension of the seminars to include a follow-up workshop with the visiting psychologist in which teachers may report the results of their efforts to implement suggestions of the earlier seminars and the problems they may have encountered.
3. Should professional staff become available for working closely with the families of the children of REPSAC, the initiation of training sessions for teachers and other staff so that they might become more skilled in and cognizant of harnessing the forces of family and school in promoting the continuing development of children even after they leave REPSAC.

### Summary

The atmosphere of the operation of the program including the attitude of the faculty/staff was characterized by openness to learning and continual searching for effective teaching techniques. Altogether, the Staff Development Component appeared to be a well balanced fusion of theoretical and practical approaches enriched by an evident concern for the development of each child in the program.

## SECTION VI

## EVALUATION DATA OF THE COMMUNITY - PARENTAL INVOLVEMENT COMPONENT

## Summary of Evaluation Design

A formative type of evaluation design was used to evaluate this component; therefore, attainment of the objectives of this component was the criterion for subjectively evaluating the component (See Section III).

The major objective of this component is extension, i.e., the inclusion and involvement of parents, the home and community environments in the education of the child. Ancillary objectives are as follows: 1) to motivate parents' interest in the preschool education of their children; 2) to provide extension training for parents in child development and in techniques of preschool education which may be applied to the home; 3) to facilitate an enrichment of the home environment through home tutoring of children in school related activities and providing parents with information and linkages to available community services (i.e., welfare, counseling, medical care, baby-sitting, night-school, etc.); and to provide for parent participation in school activities.

## Activities Observed

Several site visits, including observations of children and parents in school, observations of home visits, and interviews with the home visitor, REPSAC staff, and parents form the basis for the following statements.

To stimulate parent involvement, parents were recruited as volunteer workers and teacher aides. Parents were involved in various school projects such as the construction of crafts and school costumes, textbook

covers, etc, and other materials for use in school programs. A home loan library was established with the cooperation of REPSAC parents. Parents also donated materials and labor for the construction of playground equipment and facilities of various kinds.

Extension training was provided parents and children in the program through weekly visits by the home visitor who tutors parents and children in the home in various learning skills. Non-target children in the home are also involved through their observation of interaction between the home visitor and the target child, through participation with the target child in various learning activities, and through the diffusion of skills taught to both mother and target child.

Linkages between the home, school and community are provided through activities mentioned above and through parent/teacher conferences both at home and at school. Parent/program staff rapport noted was such that program staff were asked to interpret for parents in the local public schools, in the doctor's office, at welfare agencies, etc. Community support for the program was stimulated through the involvement of various civic agencies and through their donations to the program of various items such as clothing, toys, and food stamps. Both local public school officials and state officials such as the Director of Bilingual and Bicultural education programs for New Mexico visited the program at various times during the past year.

Parent participation was stimulated through special parent programs which provided an opportunity for parents and children to visit the school. Such programs, while not attracting the entire parent population, provided

a basis for identification with the program and strengthened the sense of parent/school community.

In sum, morale of staff, parents, and children appeared very high. Voluntary cooperation and interest on the part of parents were noted both in home and in school observations. Also noted were efforts at coordination and communication between the home visitor, the school teaching staff, and several community agencies. Analysis of this program component suggests that it is vital to the success of the REPSAC program and should be expanded as recommended in the following statements.

#### Findings and Recommendations

The educational level of the home visiting staff is such that a program of continuing in-service education should be provided for them. Such training is required not only because of the skill levels which the home visitors bring into their positions but also because of the turnover in these positions. Continuing in-service training would insure the technical competence necessary for the continued success of this program component.

Presently the home visitor's role is defined in such a manner as to require her to fulfill two major change agent functions: 1) the provision of tutoring or extension of the school program to the mother and target child, including by implication a change in the home environment through diffusion of the program to other siblings present in the home; and, 2) the provision of communication linkages between the home and the school program. As the program expands, it will be especially important to monitor linkages between parents, children, and the public schools which

will receive REPSAC children. Every effort should be made to insure that gains made in the initial stages of the REPSAC program are continued in the public school experiences of parents and children. Such growth in the program will require an extension of the home visitor's role to include formally such change agent functions as analysis, innovation, and home/community linkage; such functions are presently filled on an informal and unregulated basis. Adequate fulfillment of both the presently defined and the growth defined requirements of the home visitor's role will require an expansion of the home visitation staff in that the present load on the home visitor is such as to make difficult the fulfillment of basic role requirements such as weekly home visits to 30 children, lesson planning, individual conferences with parents and teachers, report writing, etc.

A maximum student/home visitor load should include no more than 15-20 children. Such a load would allow time not only for the completion of role requirements as presently defined but also allow time for the completion of important role functions such as the compilation and provision of a community services directory for REPSAC parents. Such a project would facilitate informing parents of available community services and agencies which might improve or ameliorate conditions in the home which are detrimental to the welfare of the child. Other important change agent functions might also be performed such as community visitations and referrals of various kind, which relate directly to the parent/community component in that they strengthen the rapport developed through home visits and link REPSAC homes to the schools and community.

Finally, within the Community-Parent Involvement Component, a quantitative means should be developed to measure the effect of home intervention and the school/community linkages provided REPSAC parents and children. To the extent that changes in the home environment are considered important to the success of the REPSAC program, quantitative data on the weight of this variable for program success is invaluable to present and future research.

SECTION VII  
FOLLOW-UP STUDY OF FORMER REPSAC STUDENTS

Purpose

The purpose of this follow-up study was to determine how well the former REPSAC students were performing in public or parochial school. Pretest data taken on these students in the Fall of 1971 indicated a high probability of failure; therefore, the intervention program (REPSAC) they attended was designed to help these students enter the mainstream of education and perform more closely to their potential. This follow-up study was designed to determine if these students were coping with the school situation in an acceptable manner.

Twelve students completed the REPSAC program in Spring, 1972 and at least by the reason of age, were scheduled to enter the first grade in the Fall of 1972. Of the twelve students completing the program, eight were found to be still living in the area and attending first grade. Six of the students were found to be attending public first grade and two were attending a Catholic elementary school.

Procedure

The procedure for the follow-up consisted of a series of conferences with teachers and administrators most closely connected with the student. In addition, test data were obtained, when available, from standardized tests used by the school, from students' individual work, and from various other types of examinations. Report cards were also reviewed in an effort to gain an overall picture of performance.

### Illustrative Case

The following case is presented with the intent of illustrating the performance of one former REPSAC student which appears to be typical of the eight former students evaluated.

May entered the REPSAC program in the Fall of 1971 as a result of meeting all the criteria for participating in the program. Her initial test scores were as follows.

Learning Aptitude (I. Q.)	71
Language Development (English)	37
Language Development (Spanish)	24

Based on data obtained from the developmental profile and REPSAC teachers' comments, May's self-image was low and her overall social adjustment was poor.

May entered the first grade in the Fall of 1972 after completing one year in the REPSAC program. Her year-end scores (REPSAC) were as follows:

Learning Aptitude (I. Q.)	81
Language Development (English)	45
Language Development (Spanish)	38

Based on data obtained from the developmental profile and REPSAC teachers' comments, May's self-image had improved substantially and her overall social adjustment was considered good.

The quantitative information relating to May's first year in school

is as follows:

Learning Aptitude (I. Q.- Otis)	84
Basic Reading Test (Comprehension)	60
Math average for year	78 per cent
Final reading grade	C

Grouping was used for math and reading. May spent most of the year in the middle group in both subjects.

Teachers comments indicated that May was well adjusted socially, worked well with teachers and other students, and appeared to have a positive attitude about herself and school.

May will be in the second grade next year.

#### Findings

In terms of group performance, the following findings are reported:

1. Of the eight former students located, none had been placed in special education classes. It was also found that none of the former students received any help of a special education nature.
2. All eight of the students have performed to a point where they have been promoted to the second grade.
3. Comments from teachers and administrators indicate that the social adjustment of the former REPSAC students has been satisfactory. In two instances, some problems occurred during the first few weeks of school. It was noted that these students had some difficulty adjusting to the school routine, i.e. these students would get up and walk around, move from one thing to another, talk at will, etc. A possible explana-

tion for this behavior is that the transition from the relatively free environment of REPSAC to a more traditional environment may have been responsible for the adjustment problems.

4. In schools where grouping was practiced, former REPSAC students seemed to be operating in the middle groups. One student was placed in the lower group while the remainder operated primarily in the lower part of the middle groups. This situation appeared common for former students in all subjects.

In essence, the former REPSAC students appear to be coping with the regular school situation beyond the point that earlier predictions indicated for such "high risk" students.

SECTION VIII  
PROBLEMS ENCOUNTERED IN EVALUATION

The only major problem encountered in the evaluation pertained to the control group as used in evaluating the Instructional Component. The evaluation design of this component was within a framework of comparing the REPSAC students (experimental group) with that of the control group in terms of certain areas/abilities. For such a comparative design it is desirable to have reasonably equivalent groups. The project director had the responsibility of providing the evaluator with the name and address of children to be used as participants of the control group. These students were usually the ones not selected to enter the REPSAC program for various reasons. For this program year, the project director provided the evaluator with 35 names of potential eligibles in the Clovis and Portales area. The liaison employee (Mrs. Patsy Encinias), had the formidable task of contracting the parents of these children.

Specifically, one dimension of the problem was locating an adequate number of control children. For various reasons (such as unwillingness to participate, child deceased, moved, children enrolled in public kindergarten and refusal to answer door), the liaison employee could locate only 17 children who were given permission to participate in the pretesting and only 14 out of this 17 for posttesting. Thus, one dimension of the problem was the size of the control group.

Another aspect of the problem was that the composition of the two groups were found to be somewhat dissimilar. For example, one of the

major criterion for selecting students in the REPSAC program is a birth weight of 5 1/2 pounds or less, yet 40% of the control group have a birth weight more than this. Also, while both English and Spanish were reported to be used in homes of 72% of the REPSAC students, only 33% of the control group had been exposed to both languages in the home. To further extend this element of the problem, it was discovered during the pre- and posttest-int that at least three control students were attending private or church sponsored kindergarten programs. Instead of eliminating these students from the control group, it was decided to let them remain in the group on the assumption that such program effect could be noted.

Although having such a small number in the control group is disappointing and frustrating from the viewpoint of evaluation and research, it was the concensus of the project director, evaluator, and liaison employee that the program was fortunate to have obtained even this number.

Although the two groups were statistically controlled, these differences between the two groups should be taken into consideration in the final analysis and interpretation of the evaluation results of the Instructional Component.

SECTION IX  
SUMMARY, FINDINGS, CONCLUSIONS, AND RECOMMENDATIONS

Summary

The REPSAC program serves as early intervention for thirty 3, 4, and 5-year old "high risk" Spanish American Children. Children are considered "high risk" as a result of their low birth weight and who will probably have various types of handicaps as they enter the first grade.

Program Goals and Objectives

The major goals of this program include: 1) Early intervention to prevent placement of children in classes for the retarded or other types of special education; 2) Provision of media and learning activities which will enhance and develop a favorable self-concept and strengthen or develop favorable attitudes toward his own and other cultural groups; and 3) Formulation of plans and activities to increase parental interest and involvement in this program and in the education of their children. To accomplish these goals, general and specific program objectives were developed. To achieve these objectives, program activities were planned and conducted within the organization of comprehensive program components. The REPSAC program and components have drawn heavily upon three experimentally developed models in early childhood education which were the New Nursery School; the responsive environment concept; and Project LIFE (Language Instruction to Facilitate Education). In addition, the Piaget-Early Childhood Curriculum is used.

### Program Components

The various program components in which program activities were organized and conducted were: instructional media; staff development; and community-parental involvement.

Activities of the instructional component were generally divided into group activities (story telling, reading, painting, cutting, manipulative toys, playground activities, and the lunch period) and individualized or small group activities (Piaget-Early Childhood Curriculum, Project LIFE, Responsive Typing Booth, and Peabody Language Development Kits).

The media component consisted mainly of developing various types of instructional media for the instructional component and preparing various types of news releases for dissemination of information.

Activities of the staff development component consisted of various types of in-service activities and seminars designed or selected to achieve the component objectives.

The community and parental involvement component attempted to demonstrate that proper supervision, guidance and training, parental influences can make a marked difference on the child's performance in school. Also, in an effort for community involvement, various newsletters were sent to various community organizations making them aware of the program and soliciting their assistance in various activities.

### Evaluation Methods

Evaluation was performed on three components: instructional, staff development; and community-parental involvement.

### Instructional

The evaluation design for the instructional component was within a framework of comparing the REPSAC students with that of the control group in terms of progress or development in certain areas/abilities. Research hypotheses were formulated but were treated in the null form when statistically treated. The basic feature of the design was a pretest, posttest, two-group analysis of covariance. The six abilities objectively measured were: learning aptitude as measured by the Hiskey; language development in English as measured by the Peabody; language development in Spanish as measured by the Peabody (Spanish); sensory and perceptual ability as measured by the Frostig; speech development as measured by the Templin; and psychomotor development as measured by the Coleman Motor Test. Also, evaluation of the self-concept was periodically made with the use of the Developmental Profiles.

The participants in the REPSAC program and the control group could not be randomly assigned; therefore, analysis of covariance, utilizing two pretest scores (the Hiskey and Frostig), were used as covariates to statistically equate the two groups. Although the groups were statistically equated, there was some concern about the size and composition of the control group.

The differences between the pretest scores and the posttest scores (mean gain score) was the basic unit used in the statistical treatment of the data and subsequent decisions made regarding the hypotheses.

### Staff Development and Community-Parental Involvement

The evaluation design for these two components was a formative type design based upon the component objectives and was conducted within a subjective framework using observations and interviews.

#### Findings

The major findings of this study pertaining to the evaluation of the instructional, staff development, and the community-parental involvement components were:

1. REPSAC subjects made significantly greater gains in speech development and language ability in Spanish than the control subjects.
2. REPSAC subjects made greater gains in sensory and perceptual discrimination, language ability in English, and psychomotor development than control subjects. Control subjects made a slightly higher gain than REPSAC students in learning aptitude. These differences, however, were not statistically significant.
3. First-year REPSAC students made significantly greater gains in speech development, language ability in English and language ability in Spanish than the first-year control subjects.
4. First-year REPSAC students made greater gains in psychomotor development, sensory and perceptual discrimination, and learning aptitude than the first-year control subjects; however, these differences were not statistically significant.
5. Second-year REPSAC students made significantly greater gains in language ability in Spanish than second-year control subjects.

6. Second-year REPSAC students made greater gains in speech development, language ability in English, and sensory and perceptual discrimination than second-year control subjects. Second-year control subjects made greater gains in psychomotor development and learning aptitude. These differences, however, were not statistically significant.

7. REPSAC subjects developed and maintained a favorable self-image while participating in the program.

8. A significant negative relationship was found between birth weight and speech development of all subjects (REPSAC and control). Correlations between the birth weight and the other five measures were not significant.

9. Activities of the staff development component appeared to be considered by the staff as an integral and a necessary part of the ongoing total program.

10. Activities of the staff development component appeared to be a well balanced fusion of theoretical and practical approaches enriched by an obvious concern of the staff for the development of each child in the program.

11. Activities of the staff development component appeared to be instrumental in effecting a smooth transition in changes of staff personnel.

12. Parents of the REPSAC students maintained a positive attitude toward the program and the activities.

13. Activities of the community-parental involvement component did assist in varying degrees in parent involvement, provided for some

extension training, and provided as linkages between home, school and community.

14. Only one child has dropped out of the REPSAC program in two years, and this was because his parents moved from Clovis.

15. As of Spring, 1972, twelve students had completed the REPSAC program, and (by age requirement) were scheduled to enter the first grade Fall, 1972. Eight of these students were found to be still in the Clovis area and attended the first grade; six attended the public school and two attended a parochial elementary school. None of these eight warranted any type of special education training and all performed to a degree (social and academic) that they were promoted to the second grade.

#### Conclusions

Based upon the findings of this study, the major conclusions were:

1. The components evaluated (instructional, staff development, and the community-parental involvement) operated as planned and functioned so as to complement each other. Specifically, it was concluded that these components had the organization, curriculum, materials, facilities, and a qualified and motivated staff to provide the desired educational experience for the target group of children and parents.

2. The program is in an active and positive process of accomplishing the long range (general) program objectives.

3. In short, the REPSAC program functioned as planned for the target group children and parents and in accordance with the approved proposal document during the 1972-73 program year; therefore, it is concluded that the REPSAC program is serving as effective intervention.

### Recommendations

Based upon the findings and conclusions of this study, the following suggestions or recommendations are made:

1. That the REPSAC program continue to develop and serve as a demonstration model and as an early childhood intervention program for such target children.

2. That the function or role of the community-parental involvement component be expanded and that one additional home visitor be added to the staff. Also, a form of professional in-service training for the home visitors be initiated as to provide necessary skills for the expanded role.

3. That the REPSAC program continue providing technical support and inter-relations with its satellite program, the Clovis-Portales Bilingual Early Childhood Program (Title VII, ESEA).

4. That the external program evaluation be continued, but adding to the evaluation design provision to compare the first, second, and third-year REPSAC students; an additional measure of the children's self-concept with a rating scale of personality and social development; and a type of quantitative measure to assist in the evaluation of the community-parental involvement component.

5. That the evaluation design of the instructional component be modified so that the criteria for evaluating the component are the specific objectives of the component rather than group comparisons. Reasons for this suggestion are: 1) a control group has been used to evaluate the component for the past two years and the purpose for using

such a comparative base has been achieved; and 2) obtaining an adequate size and "uncontaminated" control group in the Clovis - Portales area will probably be an impossible task in the next several years because of the success of the REPSAC program as well as the Title VII programs. Parents will simply refuse to permit their children to serve as controls when they know this will prevent their children from being eligible to enter either of these educational programs.

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APPENDICES



APPENDIX A

RESPONSIVE  
ENVIRONMENT  
PROGRAM  
FOR  
SPANISH  
AMERICAN  
CHILDREN

Dear Parents:

Thank you for helping the schools to develop better programs for young children. Some of you brought your children several times for the different tests, and it is appreciated.

Your child will benefit from this activity in several ways. First, he or she becomes somewhat familiar with school before he is of the age to begin. Second, he is learning and becoming familiar with teachers and other adults and school type materials from the testing. Also, the information gained is used to attempt to make a better program for young boys and girls.

All of us associated with the Responsive Environment Program for Spanish American Children (REPSAC) thank you for your help. If you have questions, please call upon us.

Sincerely,

*Bill Askins*  
Bill Askins  
Evaluator

Estimados Padres:

Gracias a ustedes por ayudar las escuelas para mejorar los programas para los jovenes. Muchas de ustedes han traído a sus hijos para los diferentes pruebas y nosotros las agradecemos.

Sus hijos aprovecharon de estas actividades in formas diferentes. Primero, ellos se familiarizaran con las escuela antes de comensarlo. Segundo, esta aprendiendo a familiarisarce con maestras y otro adultas y tipos de materiales de las escuela. Tambien, la informacion recibido ayuda a mejorar el programa para los ninos.

Nostros asociados con el programa REPSAC damos gracias por su colaboracion. Cualquiera pregunta necesaria, hagamos el favor de llamarnos.

A sus ordenes,

*Bill Askins*  
Bill Askins  
Evaluator

## APPENDIX B

## TYPICAL SCHEDULE OF LEARNING ACTIVITIES

## Group Activities

Language Development (Approximately 15 min.)

English: "Children, Children, look in the mirror. Tell me, tell me who you see." Use hand mirror in front of each child and have children name the child using first and last name.

"Put your finger on your nose." A song to stress body parts. Tell the story of the "Lonesome Hand" to also stress body parts.

Spanish: Talk about body parts, counting and colors.

## Free Choice Activities

Art: Play dough and cookie cutters. Talk about the shapes formed by the cookie cutters. Good activity for small muscle development.

Center table: Flannel board faces with flannel features. Have hand mirror close by for children to see the arrangement of their own features as they put the features on the flannel board. Have children name each part as they put it on the head.

Light table: Trace and name triangle, circle, square and rectangle.

Block area: Blocks out with farm animals.

Language Master: Use cards for identifying body parts.

Small table: Colored beads for stringing, patterning and color identification.

Transition: To draw the children to one or two areas instead of scattered at many activities.

Center table: Lego

Book area: Records and stories. Use "The Gingerbread Boy." "The Ugly Duckling," "The Happy Man and His Dump Truck."

## Individual Language Activities

(One child with one teacher or aide)

Piaget Early Childhood Curriculum (Approximately 10 min. with each child or small group of children. Present lesson in Spanish or English).

Lesson: Conservation of Liquid Quantity.

Materials: Funnels, 2 oz., 4 oz., 8 oz., containers

Instruction: Set up an area where children can pour water from one container to another.  
Have child estimate how many times he would have to fill a 2 oz. container to fill a 4 oz. container, an 8 oz. container. Then have the child perform the activity to see for himself.

Vocabulary: Funnel, cylinder; also words to describe dimensions of containers, i.e., tall, short, skinny, fat, wide, narrow, taller than, shorter than, etc..

### Project LIFE

#### Responsive Environment Typing Booth

Second Group Activity (Approximately 10 min.)

English: "Clap your hands in time to the music" (Autoharp accompaniment). Numerous verses such as "Stomp your feet." Pat your Head, Swing your Arms, Jump up and down.

"My Hands Upon My Head I Place"

Count the children in the group. Boys in group stand, count boys. Girls in group stand, count girls. Teachers in group stand, count teachers.

"Blanca Vasquez, you may walk outside. Steve Baca, you may walk outside." Sing the children's names as they go outside for a play period.

Spanish: "Venga A Ver Mi Rancho", "Mi Papayo"  
Rhythm band with puppets

#### Outside Activities

##### Swings

##### Monkey Bars

##### Sand Pile

##### Water Play

Water play (set up 3 stations near the fence). Put out syringes, basters, cans, funnels, eye droppers. Have children squirt the water through the fence. Josie, keep this under close supervision. Only one child at each station.

Put board between the two sets of steps. Have children jump on the board as you hold his hands and count the number of jumps. Count in English in the morning group. Count in Spanish in the afternoon group.

#### Snacks

Use blender to make eggnog. "What shape is the egg?" Expect the older children to use the word oval. Ask the younger child if the egg is an oval or a square. Then expect the child to say oval. Let the children crack the eggs, add the milk and push the button to turn on the blender.

Cut toast into big triangle or little triangle. Ask children, "Would you like a big triangle or a little triangle of toast?"

ADOBE EDUCATIONAL SERVICES  
REPSAC PROJECT

Individual Student Test Data for 1972-73

e \_\_\_\_\_ DOB \_\_\_\_\_ BW \_\_\_\_\_ Year In Prog. \_\_\_\_\_  
(Last, First, Middle) (Yr.-Mo.-Day) (lbs-ozs) (1-2-3)

LEARNING APTITUDE

Hiskey-Nebraska Test of Learning Aptitude

	Eval. Date	Chron. Age	Mental Age		Age Range Sub Tests	Derived IQ	Remarks
			Median	Mean			
Post Test							
Pre Test							
Gain							

Readiness Test For Disadvantaged Preschool Children (Walker)

	Eval. Date	Chron. Age	Similarities (25)	Differences (15)	No. Analogies (5)	Missing Parts (5)	Raw Sc. (50)	Perc. Rank	Remarks
Pre Test									
Gain									

SENSORY AND PERCEPTUAL ABILITY

Developmental Test of Visual Perception (Frostig)

Posttest			Eye Motor Coord.	Figure Ground	Form Const.	Position in Space	Spatial Relations	Total	Remarks
Eval. Date	Chron. Age	Raw Score							
		Age Equiv.							
		Percp. Quo.							
		Perc. Rank							

Pre Test

Eval. Date	Chron. Age	Raw Score							
		Age Equiv.							
		Percp. Quo.							
		Perc. Rank							
Gain									

08 Illinois Test of Psycholinguistic Abilities (Kirk) -  
 This test is for diagnostic purposes only and is not part of the pre post cycle.

			Aud. Rec.	Aud. Assoc.	Visual Rec.	Visual Assoc.	Remarks
Eval. Date	Chron. Age	Raw Score					
		Age Equiv.					
		Scaled Score					

III. LANGUAGE ABILITY  
Peabody Picture Vocabulary Test (Dunn) - English

	Eval. Date	Chron. Age	Raw Score	Percentile	Remarks
Posttest					
Pretest					
Gain					

Peabody Picture Vocabulary Test (Dunn) - Spanish

	Eval. Date	Chron. Age	Raw Score	Percentile	Remarks
Posttest					
Pretest					
Gain					

IV. SPEECH DEVELOPMENT  
Templin-Darley Screening and Diagnostic Tests of Articulation

	Eval. Date	Chron. Age	No. of the 50 Screening Test items produced correctly	Mean No. correctly produced by children this age & sex	Cut-off score separately. Adequate from inadequate performance at this age of child	Remarks
Post Test						
Pre Test						
Gain						

V. PSYCHOMOTOR DEVELOPMENT  
Motor Ability Test for Pre School Children (Coleman)

This test is divided into the following components: Standing Jump; Static Balance; Ball Bounce; Blocks; and Obstacle Run. The test is not yet standardized; therefore, only a raw score is available.

	Chron. Age	Raw Score	Remarks
Posttest			
Pretest			
Gain			

## APPENDIX D

## Example of An Educational Prescription

## SUGGESTED LEARNING EMPHASES

## REPSAC

Re: \_\_\_\_\_

Sex: Female

Age: 5 years (as September 1972)

EVALUATIVE INSTRUMENTS USED:

1. Hiskey-Nebraska Test of Learning Aptitude
2. Readiness Test for Disadvantaged Children (Walker)
3. Developmental Test of Visual Perception (Frostig)
4. Illinois Test of Psycholinguistic Abilities (Kirk)
5. Peabody Picture Vocabulary Test (Spanish and English versions) (Dunn)
6. Templin-Darley Screening and Diagnostic Tests of Articulation
7. Motor Ability Test for Preschool Children (Coleman)

DEVELOPMENTAL LEVELS:

1. Non-verbal I. Q. in the 105-110 range
2. Readiness Test - 89 percentile
3. Sensory and Perceptual Ability - 60 percentile (Frostig)
4. Vocabulary - English, 3 years 8 months, 8 percentile, Spanish, 3 years 2 months, 3 percentile
5. Speech Development - needs language therapy (borderline case); may need articulation help later
6. Psychomotor - comparable to majority of 5-year-olds in this experimental group

7. Psycholinguistic Abilities - some difficulty in attending to auditory stimuli; associative relationships, both auditory and visual, slightly below age level

AREAS OF LEARNING NEEDING EMPHASIS:

1. Vocabulary Building - must have an intensive language development program in both English and Spanish. Suggested materials:
  - a. DISTAR language program (use English version and translate to Spanish)
  - b. Peabody Language Development Kit - Level I - use in both English and Spanish
  - c. Language Master drills
  - d. Provide opportunity for child to relate events
  - e. Practice speaking in sentences (as in above experiences)
2. Associative Relationships
  - a. Auditory Association (in addition to materials included in above Vocabulary Building)
    - (1) Give increasingly more difficult oral instructions, beginning with one or two steps and gradually increase
    - (2) Play "Simon Says" types of games
    - (3) Train child's ability to find common characteristics
    - (4) Practice finding similarities and differences and making analogies
    - (5) Categorize or classify objects
    - (6) Identify incongruities in stories
    - (7) See enclosures I and II \*
  - b. Visual Association
    - (1) Identify colors, objects, pictures, etc.
    - (2) Practice in ability to label and describe simple pictures and objects

- (3) Sort objects by size, shape, color, usage
  - (4) Sort pictures by classifying according to usage and relationship
  - (5) Find incongruities, absurdities, or missing elements in pictures
  - (6) See enclosure V - Conceptual Skills \*
3. Visual Perception
    - a. Figure-ground exercises as suggested by Marianne Frostig
    - b. See attached suggestions (checked in red) on Visual-Motor Integration III and Visual-Motor Coordination IV\*
  4. Psychomotor
    - a. See VI enclosure\*
  5. Speech therapy by qualified therapist

\* Additional suggested techniques attached.

## APPENDIX E

### DESCRIPTION OF TEST INSTRUMENTS

A brief non-technical description of each of the test instruments proposed to be used during 1972-73 is listed in the following paragraphs. Personnel interested in more detail concerning the tests are invited to consult technical data provided by the publishers of the tests or refer to the Mental Measurements Yearbook, Buros, editor.

#### LEARNING APTITUDE

Hiskey-Nebrasks Test of Learning Aptitude. This test given by a clinical psychologist, does not depend entirely upon verbal communication for administration. It develops through sub-tests, a mental median and a derived operational level (IQ). It has a background of psychological and special education testing use. It contains eight subtests for this age group including bead patterns, memory for color, picture association, paper folding, visual attention span, block patterns and completion of drawings.

Readiness Test for Disadvantaged Pre-School Children (Walker). A nonverbal instrument designed to assess a child's readiness to enter public school programs. Two forms are available. Form A identifies areas of weakness and facilitates the establishment of individual remedial programs. Form B, administered some time after Form A, assesses the efficiency of the program used and the child's progress. Both forms have 50 multiple choice items and are arranged into four parts: Likeness, Differences, Numerical Analogies, and Missing Parts. Instructions are in Spanish, English, and French. The test is individually administered and training is not necessary. Norms are provided. There are no separate Spanish norms, but the two forms of the test were administered in Head Start and Day Care Centers to a total of 11, 933 children, some of whom were Spanish-speaking.

#### LANGUAGE ABILITY

The Peabody Picture Vocabulary Test (English) is designed to provide an estimate of a subject's "verbal intelligence" through measuring his hearing vocabulary. The test also has wide utility as a clinical tool. Besides being effective with average subjects, it has special value with certain other groups. Since subjects are not required to read and the responses can be non-oral, the test is especially fair to non-readers and remedial reading cases. With the drawings free of fine detail and figure-ground problems, the test is apparently appropriate for at least some perceptually impaired persons. According to the Test Manual, the scale is appropriate for subjects between 2 1/2-18 years

who are able to hear words, see the drawings, and has the facility to indicate "yes" and "no" in a manner which communicates.

This test has had extensive use in the Southwest in recent years in both English and Spanish. There is no standard version for the Spanish test, but the one used has been used widely. The test consists of sets of four line drawings to a plate and a vocabulary list. The subject points to the appropriate picture upon the examiner's pronunciation of the name or action word.

### SENSORY AND PERCEPTUAL ABILITY

Development Test of Visual Perception (Frostig). This test is an aid to evaluating the perceptual skills of young children. This test yields scaled scores in five different perceptual areas, enabling the examiner to identify both strengths and handicaps. These areas are: I. Eye Motor Coordination; II. Figure Ground; III. Constancy of Shape; IV. Position in Space; V. Spatial Relationships. Overall results may be recorded in perceptual quotients, which readily reveal a child's deviation from the expected perceptual development for his age level. The test was developed at the Marianne Frostig School of Educational Therapy, Los Angeles, where it has been used in the evaluation of children referred for learning difficulties or neurological handicaps.

Illinois Test of Psycholinguistic Abilities (Kirk). This test is designed to measure certain operationally defined perceptual functions, and to pinpoint the age at which they normally develop. There will be four subtest scores; auditory, visual reception and auditory and visual association.

### SPEECH DEVELOPMENT

Templin-Darley Test of Articulation. This measure is to be administered by a qualified Speech Therapist. It is a general screening test of 50 items in English which require a mimicked response by the pupil. The items selected "have been found to discriminate between good and poor articulation of preschool and kindergarten children."

### PSYCHOMOTOR DEVELOPMENT

Motor Ability Test for Pre-School Children (Coleman). This test was designed and validated by Dr. Gene Coleman, Department of Physical Education, Texas Tech University. The purpose of the test is to measure children's growth in motor ability. The components of the tests are: dynamic balance; static balance; ball bounce; hand-eye coordination; and obstacle race. In general, the test measures coordination, speed agility, ability to change directions, sequence of moves, and ability to follow directions.

## SELF CONCEPT

The Developmental Profile (Bessell and Palomares) is a subjective evaluation of children's behavior under a variety of circumstances. These rating scales are prepared periodically jointly by two teachers. The teachers make ratings on a printed form according to six affective areas: awareness of self; self-confidence; interpersonal comprehension; sensitivity to others; effectiveness; and tolerance. Because of the inherently subjective nature of these profiles, there is no objective scale of accomplishment or standard in terms of age-achievement scores. The profiles can provide a source of insight and understanding of emotional development.