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There are four subscales:

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    a. What is your first name?

    b. Show me your eye.

    c. Raise your hand.

2. Associative Vocabulary--This measures the skill of the child in using the English language. Such questions as these are used:

    a. Which way does an elevator go?

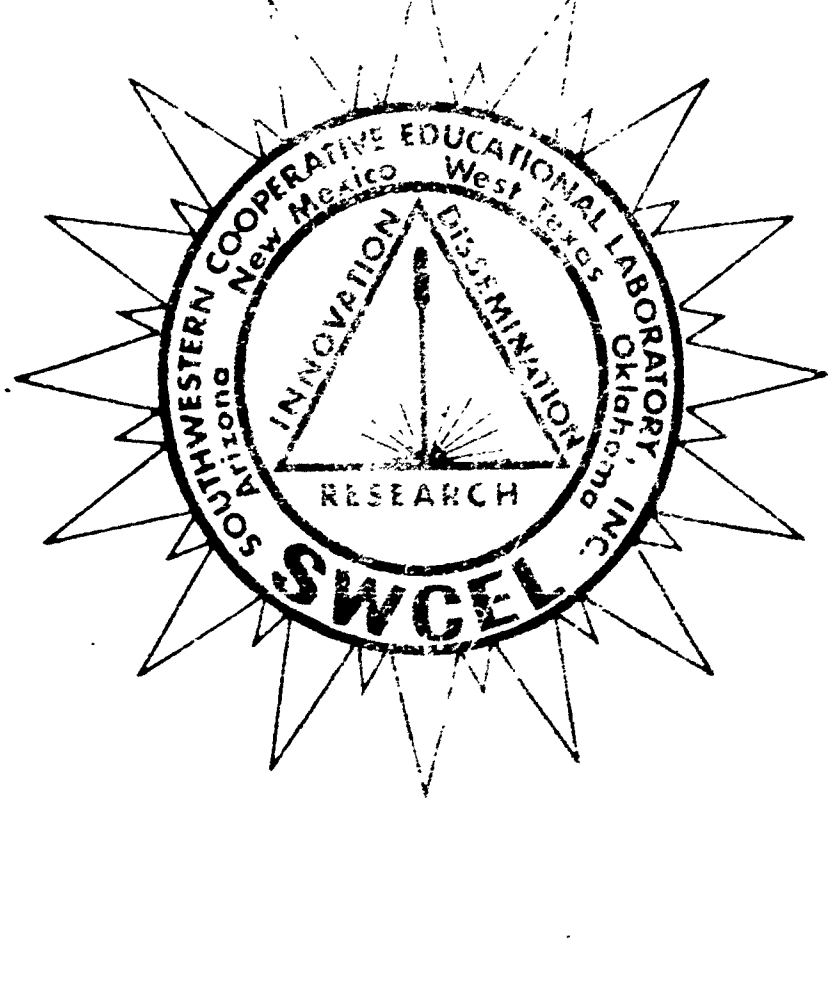
    b. What does a policemen do?

    c. What time of the year is hottest?

3. Concept Activation-Numerical--This subtest examines the child's ability to cope with numerical concepts. Such statements as these are used:

    a. How many eyes do you have?

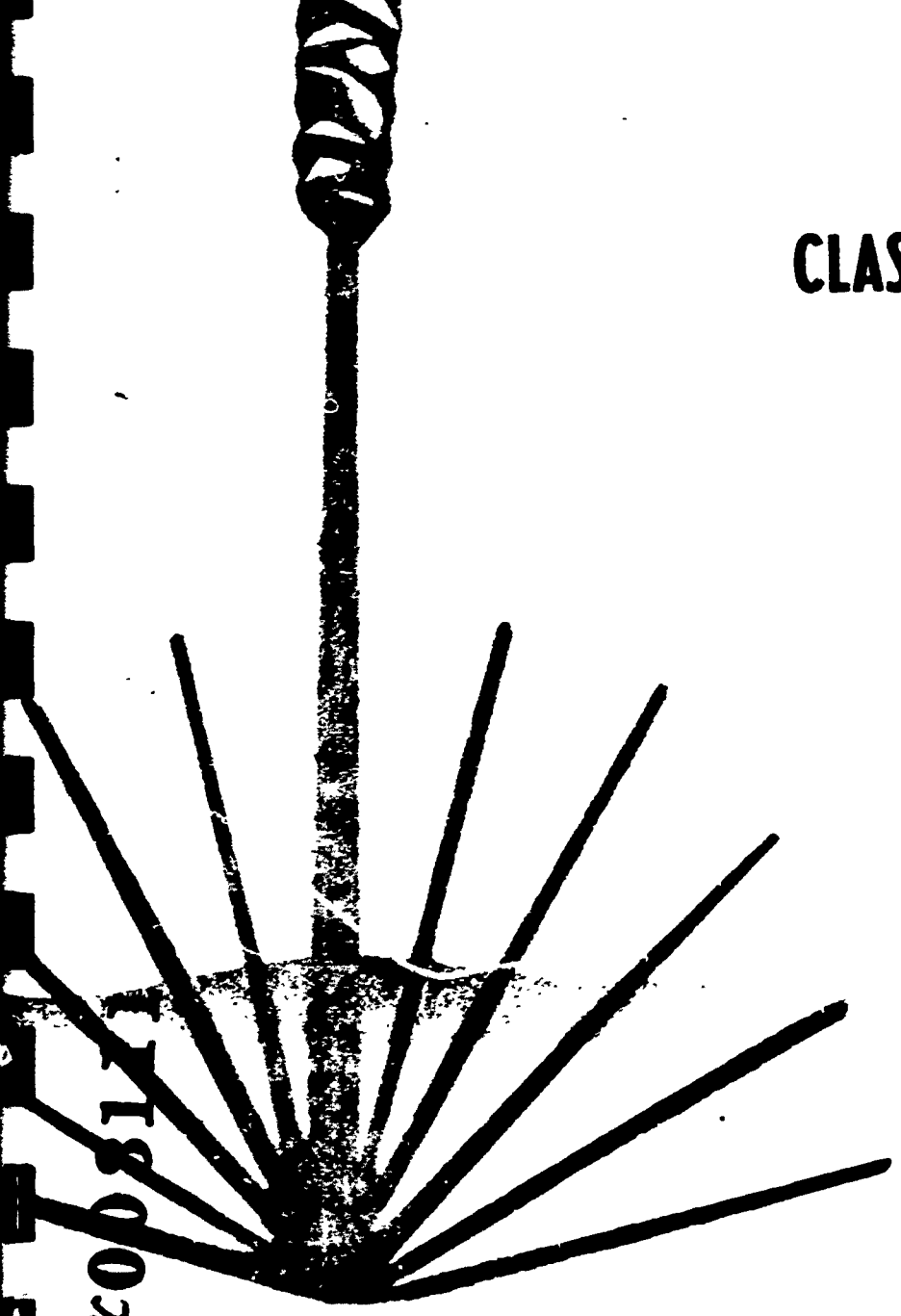
    b. Count to five.



CLASSROOM STRATEGIES:

CULTURE & LEARNING STYLES

VOL. I



CLASSROOM STRATEGIES: CULTURE AND LEARNING STYLES

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PREFACE

Perhaps for many years alert educators have noted differences in the readiness of various pupils entering the public schools. It is likely that greater differences were especially noted among children coming from different ethnic backgrounds and in their varying abilities to move into language arts programs. These differences seem to be taken for granted, and schools have attempted to do little, if anything, to compensate for these differences.

Staff members at SWCEL, under the leadership of Drs. Thiel and Garber, hypothesized that these pupil differences were not necessarily related to intelligence factors at all but were the results of the child having been exposed to different learning styles in their respective homes. It was hypothesized that the culture of the home manifested itself, among other ways, in the manner in which young children are taught.

A carefully designed testing program to test this hypothesis was completed during 1967-68. The results substantiated the hypothesis to an almost unbelievable degree. Instructional programs can be designed which will compensate for these inherent differences which children have when they enter public school.

This manual is designed to present information which will be helpful to teachers as they look for these pupil differences in children entering school. The implication is that prescriptives may be developed which will provide a more scientific approach to this particular problem. Thiel and Garber are to be commended for the fine work they have done in developing their manuals to accomplish this purpose.

Paul V. Petty

Albuquerque
June 1968

Introduction

President Johnson abdicates in favor of unity. Dr. Martin Luther King is silenced. Dr. Benjamin Spock is brought to trial for encouraging dissension from the draft. Rev. Ralph Abernathy leads the Poor Peoples March in Washington. Reies Tijerina leads an attack on the Tierra Amarilla Courthouse. Mario Savio is imprisoned during the Berkely insurrection. "Burn Baby, Burn" becomes a ghetto slogan. Sen. Robert Kennedy is murdered.

Against this collage of 1960 social crises, the teacher of culturally disadvantaged youth sometimes proceeds with convictions based upon the eternal truths of the 1930's. Emphasis may be placed on teaching the "whole" child. With tender loving care the children of the poor are guided through the primary grades dropping further and further behind their middle majority peers. When they reach the unmerciful legal age of 16, they drop out of schools into unemployment, alienation and despair. They have been wholly educated to fail.

The gloom of this description is intended to reflect the need for change in the education of the culturally divergent child. There can be no doubt that a crisis exists in the education of the poor. Something must be done. It is the purpose of this manual to suggest a program of change that may ameliorate the educational conditions which contribute to the poverty cycle. Before such suggestions are made, the basis for making them will be discussed.

THE NEED

In the Southwestern United States, several groups of American Indians have been living in poverty along with their Rural Spanish American counterparts. The Southwestern Cooperative Educational Laboratory (SWCEL) has dedicated its program of educational innovation to the educational remediation of these pecple as well as tc other impoverished groups. Before beginning such a program, a study was undertaken aimed at describing the educationally relevant strengths and weaknesses among these groups.

The Target Groups

Studied were first-graders representing Navajo and Pueblo American Indian children as well as first-graders representing Rural Spanish American children. Both boys and girls were included. Owing to a limitation in funding, other groups were not included. Too, not every group of Pueblo Indians was represented. Rural Spanish American first-graders came from a Northern New Mexico school district, therefore, generalizations from this sample to all first-grade Rural Spanish American, Pueblo or Navajo children must be guarded. The sample was composed of 65 Navajo, 75 Pueblo and 65 Rural Spanish American children.

Definitions

For convenience, the technical terms employed in the reporting of this study are listed on the following page. Should the reader need to refer to any of the technical terms of psychometry employed in later sections of the paper, he may find them listed under the following.

Categories:

1. Illinois Test of Psycholinguistic Ability
2. Peabody Picture Vocabulary Test
3. The Preschool Inventory

Illinois Test of Psycholinguistic Ability

1. Auditory Vocal Automatic--Correct grammatical form must be provided in sentences, e.g., "Here is an apple." "There are two _____."

2. Visual Decoding--Matching a stimulus picture to its perceptual counterpart, e.g., Office table and coffee table.

3. Motor Encoding--Expressing one's ideas in terms of meaningful gesture, e.g., "Show me what you should do with this." (hammer)

4. Auditory Vocal Association--A verbal analogies test, e.g., "Soup is hot." "Ice cream is _____."

5. Visual Motor Sequencing--Sequence of geometric shapes must be reproduced from memory.

6. Vocal Encoding--Describe a simple object verbally, e.g., Block, Ball.

7. Auditory Vocal Sequencing--Digit repetition as in Binet.

8. Visual Motor Association--Relate pictures (by pointing) on some conceptual basis, e.g., Sock with shoe.

9. Auditory Decoding--Vocabulary test requiring only "yes" or "no" answer, e.g., "Do females slumber?"

10. Full Scale--This is a composite measure derived from summing all the subscale scores.

Peabody Picture Vocabulary Test

This test, though related to intelligence test scores, is essentially a measure of English language hearing vocabulary. The subject is required to select one picture out of four which represents an English language spoken word. The subject makes this selection by pointing to the appropriate picture.

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There are four subscales:

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    a. What is your first name?

    b. Show me your eye.

    c. Raise your hand.

2. Associative Vocabulary--This measures the skill of the child in using the English language. Such questions as these are used:

    a. Which way does an elevator go?

    b. What does a policemen do?

    c. What time of the year is hottest?

3. Concept Activation-Numerical--This subtest examines the child's ability to cope with numerical concepts. Such statements as these are used:

    a. How many eyes do you have?

    b. Count to five.

c. Show me the second one (in a row of five checkers).

4. Concept Activation-Sensory--This subtest examines the child's ability to handle perceptual stimuli. Such statements as these are used:

a. Draw a line.

b. Which is bigger; a tree or a flower?

c. Color the circle yellow.

A total score on the Preschool Inventory is derived by summing the four subtest scores.

Measures

Some 62 measures were taken on each of the 205 children studied. Because of missing information the final sample included 53 Navajo, 57 Pueblo and 52 Rural Spanish Americans. Essentially the measures were designed to tap the following gross constructs.

1. Leaning styles
2. English Language Hearing Vocabulary
3. Entry Skills
4. Environmental Process Characteristics
5. Motivation

Table I lists these major variables and indicates the instrument employed in measuring it. (See Table I on page 7.) A comparison of the three groups of children on the Learning Style variable is presented in Figure 1. (See Figure 1 on page 9.)

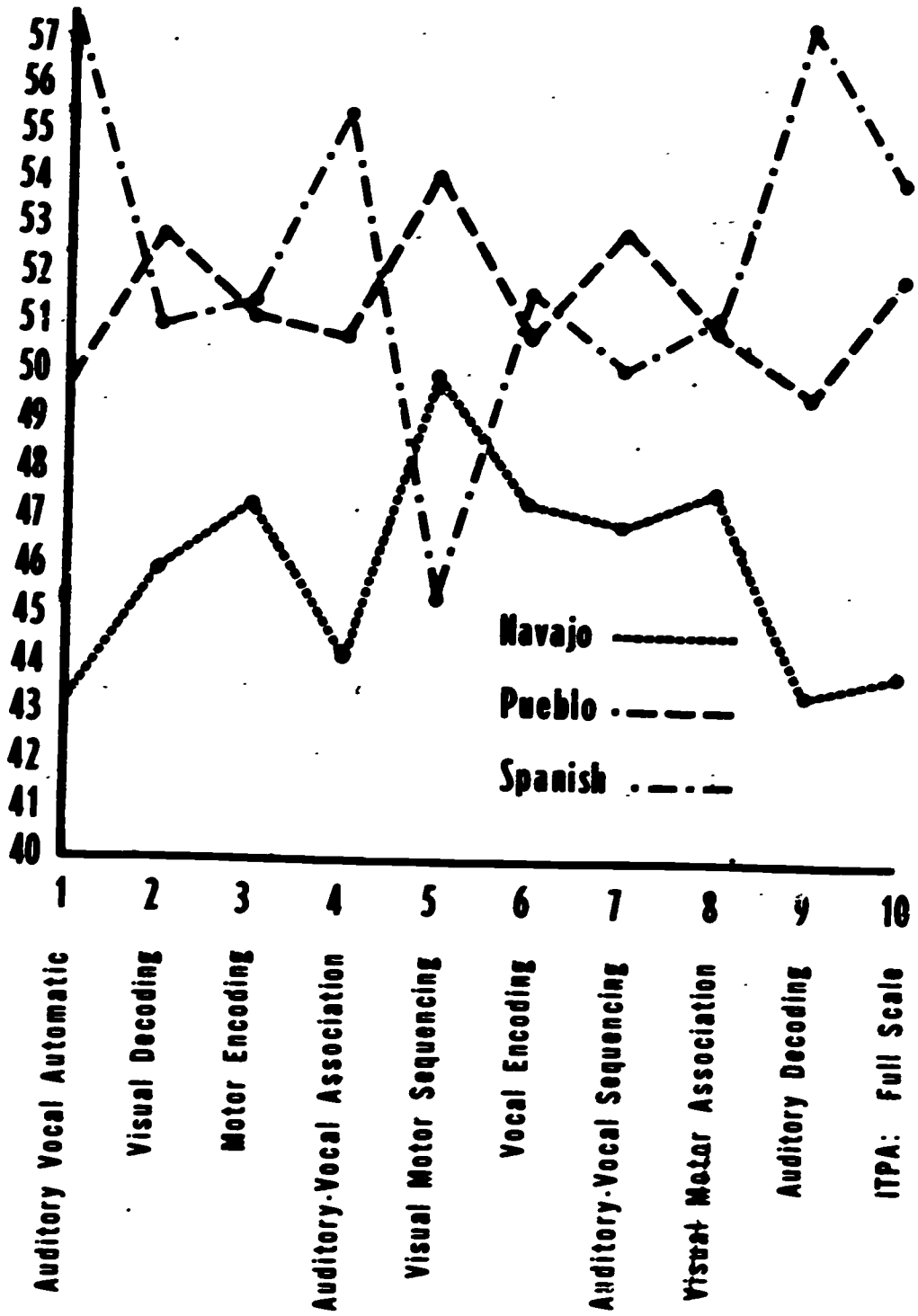
A general trend seems to emerge. The Rural Spanish American children score higher than the Pueblo, who, in turn, score higher than the Navajo. However, in areas where visual communication channels are employed, the Indian children's relative strength seems to be greater.

TABLE I

VARIABLE DESIGNATIONS AND
THEIR RESPECTIVE MEASURING INSTRUMENT

Variables	Instruments
Learning Style	Illinois Test of Psycholinguistic Ability (ITPA)
English Language Hearing Vocabulary	Peabody Picture Vocabulary Test (PPVT)
Entry Skills	Preschool Inventory Southwestern Cooperative Educational Laboratory Child Interview Scale and Test Information Sheets (SWCEL Scale)
Motivation	Items related to self-esteem, mother-father identification, reward preference, locus of control and test/school anxiety
Environmental Process	Wolf's Environmental Process Characteristics Home Interview Questionnaire

Fig. 1 A Comparison Using Mean T Scores of Navajo, Pueblo, & Spanish-American Children on the Illinois Test of Psycholinguistic Ability



Note, the high score of the Pueblo children on the fifth subscale, Visual Motor Sequencing. Also note the same sort of performance on the eighth subscale, Visual Motor Association. On this subscale, there were no significant differences among the three groups which may be interpreted as an improvement in favor of the Indian group.

From this data, one might suspect that the Indian children are somewhat more adept at using visual channels for communication. More about this later!

English Language Hearing Vocabulary

The Peabody Picture Vocabulary Test (PPVT) was selected to measure the English language in vocabulary strength of the children studied. We found a clear and significant separation among groups on this measure. On the raw score, PPVT, the Rural Spanish American performed highest, followed by the Pueblo and then the Navajo. More will be said about this finding later on too!

Entry Skills

The Preschool Inventory and the SWCEL Entry Skills scale were employed to assess the entry skills variable.

The Preschool Inventory may be regarded as a test which measures the level of achievement that a child reaches before entering school. Its four subscales; (1) Personal-Social Responsiveness, (2) Associative Vocabulary, (3) Concept Activation-Numerical, and (4) Concept Activation-Sensory are described under the section titled "Definitions." Owing to the unrefined nature of the SWCEL Entry Skills scales, these are not discussed here.

On the Preschool Inventory, the same trend emerged with the Rural Spanish American scoring highest followed by the Pueblo and then the Navajo.

Figure 2 shows this relationship graphically. (See Figure 2 on page 13.) Of note is the relative similarity between Rural Spanish American and Pueblo children on the Concept Activation-Sensory subscale of this preschool achievement battery. It seems that in the area of handling sensory data, the Pueblo are as strong as the Rural Spanish. This, too, has a strong implication for the educational remediator which will be discussed in a later section.

Environmental Process Characteristics

Home interviewers, using a controlled technique of questioning, visited the parents of the pupils studied psychometrically. The results of what they found are graphically presented in Figure 3. (See Figure 3 on page 15.) The dimensions of Figure 3 are listed below.

A1. Nature of intellectual expectations of child

A2. Nature in intellectual aspirations for child

A3. Amount of information about child's intellectual development

A4. Nature of rewards for intellectual development

B1. Emphasis on use of language in a variety of situations

B2. Opportunities provided for enlarging vocabulary

B3. Emphasis on correctness of English language usage

C1. Opportunities provided for learning in the home

C2. Opportunities provided for learning outside the home (excluding school)

Fig. 2

A Comparison Using Mean T Scores Among Navajo, Pueblo, and Spanish-American Children on the Preschool Inventory

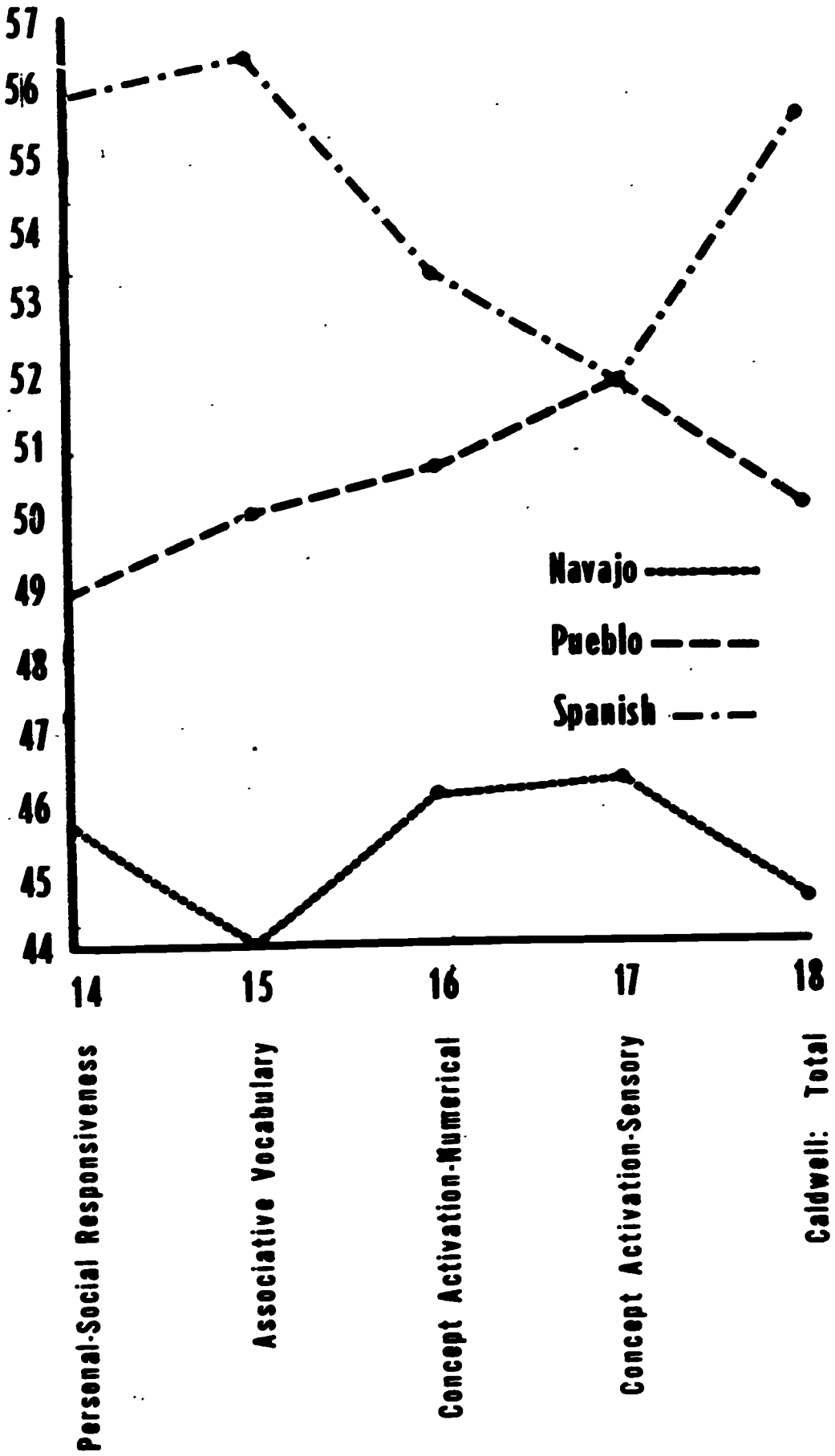
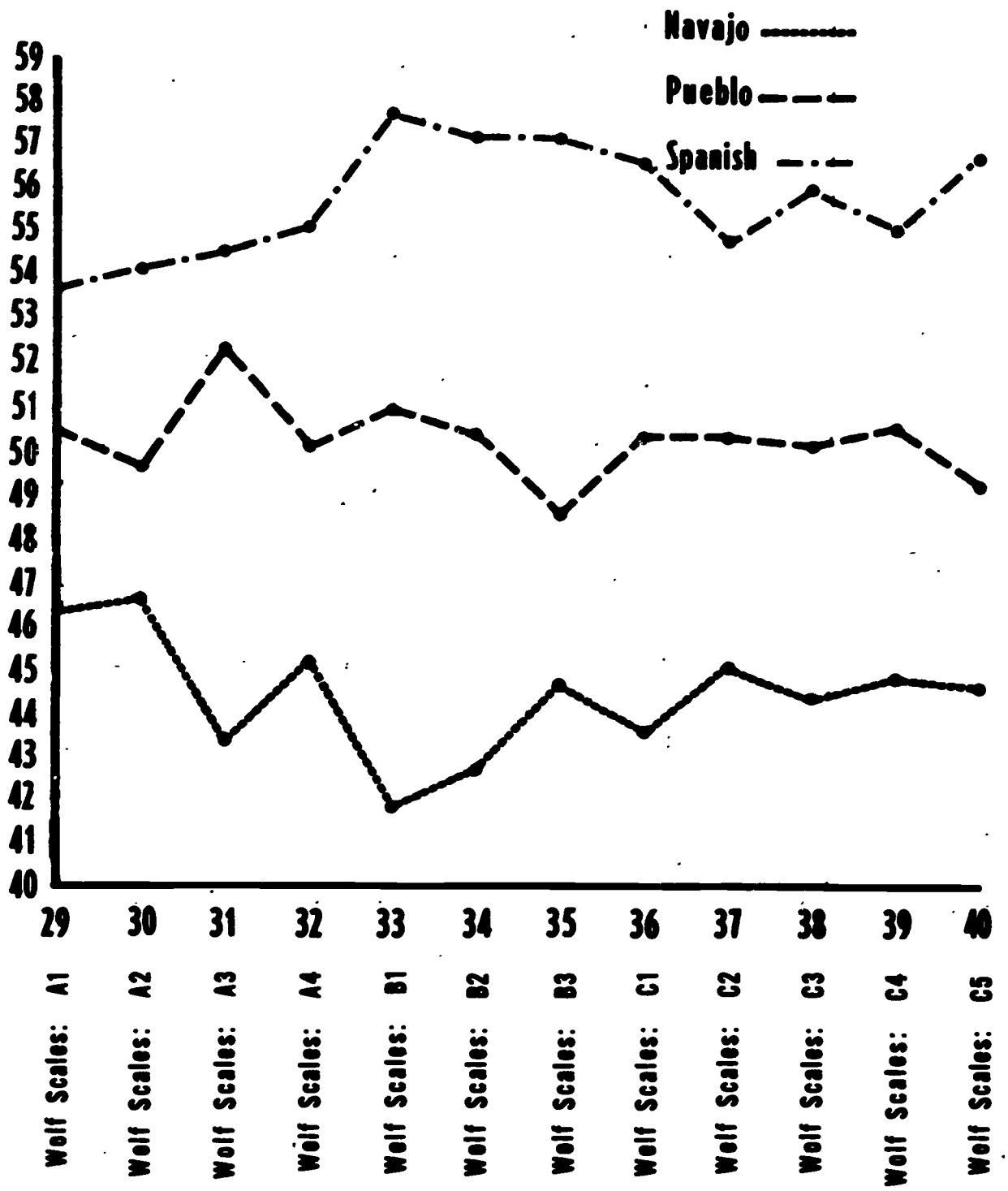


Fig. 3 **A Comparison Using Mean T Scores Among Navajo, Pueblo, & Spanish-American Children on Environmental Process Variables**



C3. Availability and encouragement of use of supplies

C4. Availability and encouragement of use of books (including reference works, periodicals and library facilities)

C5. Nature and amount of assistance provided to facilitate learning in a variety of situations

Clearly and significantly, each one of the dimensions of environment process separated the three groups. In fact, the discriminations were significant beyond the .001 level.

Important implications from this set of findings can be pointed out to the interested educator. These implications will also be discussed in a later section.

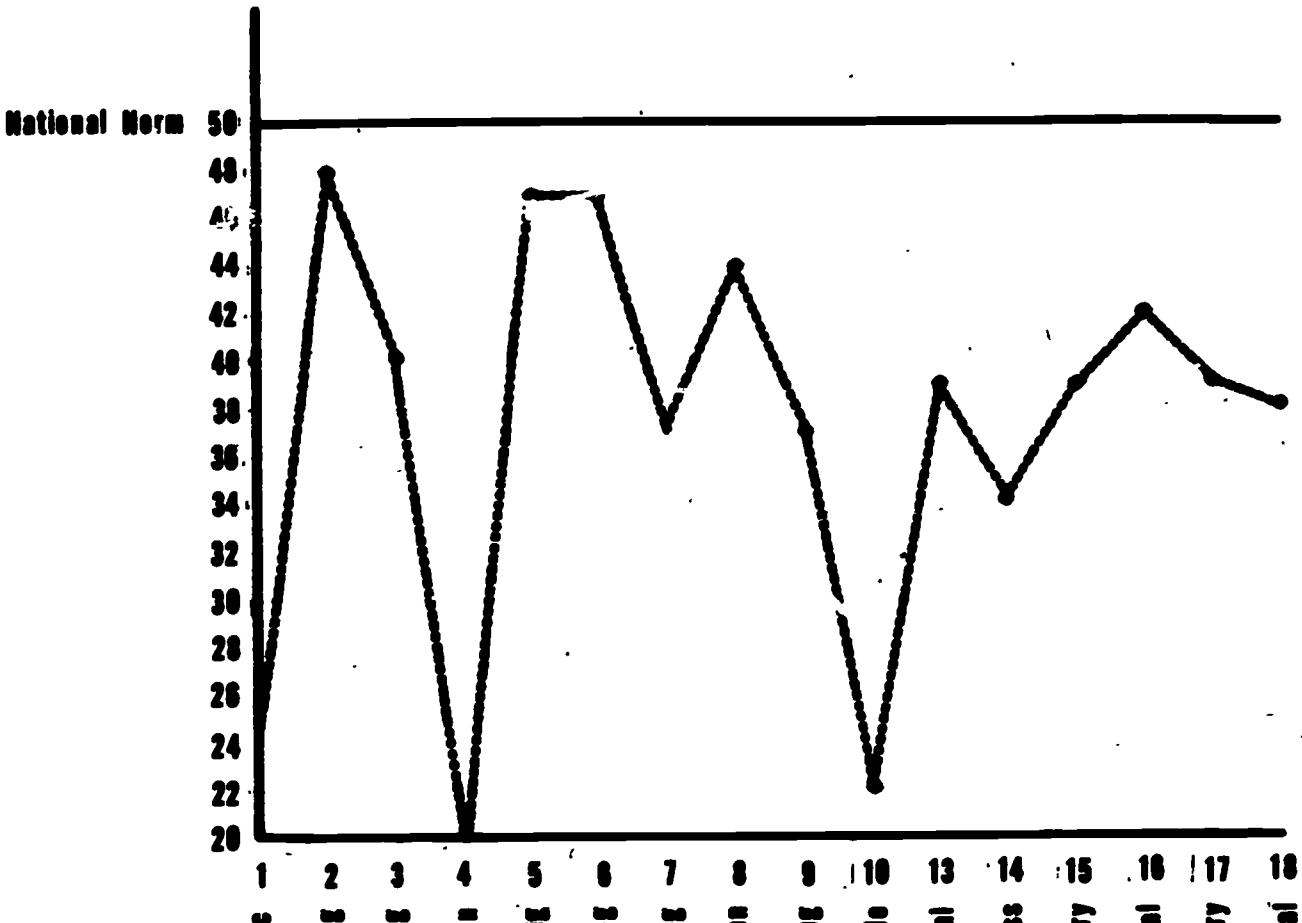
Another point worth noting is that when compared to an Anglo normative group, the children studied scored relatively low. Consider Figure 4. (See Figure 4 on page 19.) Figure 4 shows the relationship of all three groups of children studied in relationship to a national norm.

It is clear that the children studied here have linguistic skills which differ from those of the middle majority culture. Though this may be a way of "Gilding the Lily" it can be safely said that the children we studied are culturally different in that they score significantly below Anglo norms. Of more importance is the implication that because of this language retardation, the probability is great that in a usual school setting these children will progressively decline in academic skills in comparison with their Anglo counterparts.

One final bit of information must be presented. A special statistical analysis, a multiple discriminant function analysis, was employed. This analysis allowed us to make two very important statements. The

Navajo, Pueblo, and Spanish-American Composite Scores Showing the Relationship Between the 3 Groups Studied and the National Norms Designated as a T Score of 50

Fig. 4.



first statement was this--On the basis of 34 measures on each pupil one could safely say that these measures separate the groups rather accurately. The second statement was this--There is enough similarity within each group of children studied to make statements about the group as a whole rather than for each specific individual in the group.

Figure 5 (see Figure 5 on page 23) shows how accurately we could predict the actual group from which each of the children came.

This is important information. It allows us to suggest teaching strategies for entire classrooms. Otherwise, we would have to make statements about what to do for each individual child who was studied.

Now let us summarize our findings so that we can refer to them more readily.

SUMMARY OF FINDINGS

A numerical listing of the major findings described previously are listed below:

1. An overall trend seemed to emerge. With a few important exceptions, the Navajo failed to perform as well as the Pueblo who in turn, scored lower that the Rural Spanish Americans.
2. An important exception to this overall trend was reflected on the ITPA subtests employing visual channels, and on Concept Activation-Sensory subtest of the Preschool Inventory.
3. English Language Hearing Vocabulary as measured by the PPVT reflected the general trend of finding number 1 above. At the same time, all groups studied fell well below Anglo norms not only on this scale but on practically all measures.

FIGURE 5

THE RELATIONSHIP BETWEEN ACTUAL PLACEMENT AND PREDICATED PLACEMENT OF NAVAJO, PUEBLO AND SPANISH FIRST GRADERS AS DETERMINED BY A MULTIPLE DISCRIMINANT FUNCTION ANALYSIS OF EACH SUBJECT ALONG 33 VARIABLES

PREDICTED CLASSIFICATION

ACTUAL CLASSIFICATION	NAVAJO	PUEBLO	SPANISH	N
NAVAJO	45	7	1	53
PUEBLO	9	43	5	57
SPANISH	0	3	49	52

4. The responses given by parents of the children studied reflected a clearly differential culture pattern. On the Environmental Processes Questionnaire, the three groups could clearly and significantly be separated.

5. Multiple discriminant function analysis provided a basis for considering the children as belonging to separate classes--each with its own characteristics. Otherwise, one would be forced to conclude that each child would have to be treated on the basis of his own individual set of strengths and weaknesses.

With this information, what can be done to modify teaching strategies and facilitate student learning among these culturally divergent children? This is the concern of the following discussion.

Before launching into a proposed set of strategies aimed at remediating culturally divergent first-graders, let us compare two approaches to understanding the developing child. These two approaches are reflected in the views of two different authors--Piaget and Skinner. The reason these ideas have been selected is that they employ divergent models in accounting for learning and development in the child.

Piaget's is a cognitive approach to understanding the stages of intellectual function. Skinner's is an S-R approach to understanding learning processes in the child. After analyzing their essential views, it may be possible to build a model which synthesizes their seemingly divergent positions. At the same time, a suggested set of strategies will be presented focusing upon the remediation of the children we have studied in such psychometric detail.

Neither time nor space permits a fully comprehensive review of the extensive writings and brilliant thoughts of the great Swiss psychologist, Jean Piaget. Nor would the present author presume to be capable of such a vast undertaking. Prof. John Flavell, formerly of the University of Rochester, has undertaken such a formidable study and his book, The Developmental Psychology of Jean Piaget, does an admirable job of handling Piaget's somewhat complicated if not obtuse ideas. However, a brief overview of Piagetian thought is presented with the hope that what will be omitted for the sake of clear exposition will be sought elsewhere by those interested.

Piaget actively is engaged in the immense task of codifying the structure of human intellectual development. He not only is interested in describing various stages of development at which the child is able to make certain qualitatively different types of reasoning, but also is able to show the processes which the child employs that allow for a progression from stage to stage.

Two major processes are described--organization and adaptation. These are called functional invariants in that though they are processes, they remain as part of the child's characteristic mode of behaving throughout all stages of intellectual development.

Organization refers to the child's perception of reality in terms of totalities. For example, the word "Dad" may be cognized in the young child as the man in the grey flannel suit who comes home at suppertime and gets most of Mom's attention. The child has organized the concept "Dad" to include this one set of stimulus relationships and no others. Adaptation is the other functional invariant. It, in

turn, is composed of two counter balancing components, assimilation and accommodation.

Adaptation takes place when information is first assimilated, brought into the child's view of reality and then accommodated. The child changes his idea of reality to handle the new information. With this adaptation, a new organization takes place and the child may be deemed to have expanded his concept of reality.

For example, the child who thought of "Dad" as referring only to the strange type described earlier may hear his playmate refer to a totally different person as "Dad." He may assimilate this information, and accommodate by developing a concept of "Dad" as any old man with a grey flannel suit who has children. This would reflect an adaptation of the child's old way of organizing reality. His concept of "Dad" has been enlarged. This process continues until the concept of "Dad" becomes more differentiated. The child's view of reality is handled by more and more sophisticated concepts. "Dad" finally becomes an ascriptive concept covering a wide range of events that are attributable to the meaning of father.

B. F. Skinner might handle the notion of concept formation in a different way. Skinner's view of learning is essentially behavioristic. Avoiding what happens inside the child, he attempts to explain behavior in terms of stimulus-response associations. For instance, as soon as the child is able to discriminate the father from other objects in the environment, the chances of learning the meaning of "Dad" become favorable. When the child is applauded for uttering "da-da" or some such sound in the presence of his father, Skinner would claim the probability

of making a similar sound would increase when father was present.

The appearance of father becomes the discriminated stimulus. The utterance of the word "da-da" becomes the sought after response. The approval for the emitted response is part of the reinforcing condition. With a series of repetitions, "da-da" becomes associated with the man in the grey flannel suit who comes home at five and gets most of Mom's attention. More reinforcement shapes "da-da" into "Dad." Experience with other "Dads" of other children allows for a wider generalization of the response "Dad" to men who come home at five wearing grey flannel suits.

Skinner's mechanistic behaviorism is a model which teachers can employ to shape behavior in students. If you can set up conditions which allow the child to discriminate the items to be learned and then reinforce the appropriate behavior, the chances are greatly enhanced of the child learning a desired behavior.

Piaget's cognitive approach to intellectual development is also a useful model for teachers. If you can build on the ideas the child already has, by assisting the child in adapting through accommodating and assimilating, you stand a good chance of developing the child's perceptual organization of reality.

The point is this--both models account for facts. Either approach will help modify behavior in children. Whichever model you choose is unimportant. What is important is that you change the behavior or effect learning in your students. All that the theoretical approaches to development or learning are intended to do is explain and predict behavior. This is a form of art, not a science. You may increase the

skill of your art by understanding and/or employing a scientific model such as Skinner's or Piaget's. It is for this reason that these divergent writers were cited. In the final analysis, your skill in moving the child from where he is to where you want him to be will depend more upon your own sensitivities and artful practice than upon the way you follow either Skinner's or Piaget's scientific formulations.

Certain facts about the learning style, English Language Hearing Vocabulary entry skills and home environment process characteristics have been generated about culturally divergent first-graders of Rural Spanish American and Indian background in the Southwest. The approach which you decide to employ in facilitating change among your students is not so important as your consideration of the facts--the description of strengths and weaknesses within your children. Then you must determine your objectives, after which you proceed using your own strategies. After all, in reality most teachers are more concerned with teaching than with substantiating theory.

We have found that the Navajo and Pueblo children who were examined suffered from auditory channel deficits. They scored low on the ITPA subtest of Auditory Vocal Automatic, Auditory Vocal Association, and Auditory Decoding. Furthermore, their English Language Hearing Vocabulary was low too, reflecting an auditory channel deficit. This deficit may account for the poor showing in entry skills--although cultural factors undoubtedly would have influenced their scores here.*

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*Cultural factors more than likely influenced their scores on all tests which were heavily biased in favor of middle majority norms. Nevertheless, since the school remains a middle majority institution, to do well in such a situation requires middle majority skills which the tests measured.

What can be done to remediate auditory channel disabilities similar to those of the children who we examined? Bereiter and Englemann have suggested an approach which we would like to present for your scrutiny. Though it was formulated for the remediation of Negro culturally deprived preschool children, it may have some applications which are relevant in the Southwest.

Essentially, the Bereiter and Englemann approach treats areas of weakness in the language development of the child. The guiding philosophy underlying this approach views the child as having specific deficits which are to be remediated. This is in opposition to the general child-centered belief that the whole child must be treated.

Employing a strategy of direct instruction "consisting of deliberately planned lessons involving demonstrations, drill exercises, problems and the like," (Bereiter and Englemann, p. 63) these authors were able to demonstrate considerable growth in language skills development among culturally disadvantaged Negro preschoolers.*

What may be regarded as a radical approach to childhood education is required. This approach is predicated upon a concern for the following five major points:

1. By the age of three or four, disadvantaged children are already seriously behind other children in the development of aptitudes necessary for success in school.

2. Disadvantaged children must somehow "catch up" in the development of these abilities, or they will enter elementary school with

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*Carl Bereiter, and S. Englemann, Teaching Disadvantaged Children In Preschool. (Englewood Cliffs, New Jersey: Prentice-Hall Inc., 1966).

handicaps that will spell failure for a large percentage of them and a limited future for all of them.

3. If they are to catch up, they must progress at a faster than normal rate.

4. A preschool program that provides the usual opportunities for learning cannot be expected to produce learning at above normal rates.

5. A short-term preschool program cannot be expected to produce above normal gains in all areas of development at once; a "well-rounded" program is therefore incompatible with the goal of catching up: selectivity is necessary.*

The following is an example of a lesson designed to teach children to classify things as weapons or non-weapons.

Presentation	Reasons
TEACHER: (Presents picture of rifle) This is a _____.	She begins with no verbal explanation. Lengthy verbal preambles do not make learning easier or the material more meaningful to naive children. They simply bore the child or entertain him in a passive nonproductive manner.
CHILD B: Gun TEACHER: Good. It is a gun.	She would have favored the word rifle instead of gun, but since gun is correct and since the response was apparently the product of thinking, she uses gun, and she praises the child.
Let's all say it: This is a gun. This is a gun. Again. This is a gun.	The children seem uninterested. Learning will not proceed smoothly unless the teacher can secure the children's interest. Many motivating devices are possible, but the teacher prefers one that will favor the members of the class who are paying attention.

*Ibid., p. 19.

Let's say it one more time: This is an alligator.	This device would not be recommended if the children had only a tenuous grasp of the concept. The teacher feels reasonably sure, however, that every child in the class knows what a gun is. The task, therefore, is a test of their attention, not their knowledge.
CHILD D: It ain't neither. It a <u>gun</u>.	
TEACHER: That's what I said. I said "This is a bulldog."	All the children are interested now. They are aware of the sham battle of wits and they enjoy it, because they understand that they usually win.
CHILDREN (A, B, C, D, E): No, no. It ain't no bulldog. That a <u>gun</u>.	The children are laughing at the teacher. She pretends to be hurt.
TEACHER: Well, what did I say?	She has ordered the task so that the proof hinges on what was said. The children who attended to the presentation are the only ones who are in a position to apply the <u>coup de grace</u>.
CHILDREN: You say that a bulldog.	The teacher apparently wilts, as the children laugh.
TEACHER: You're just too smart for me. You listen so big that I can't get away with a thing.	The moral: Knowledge is strength. If one thinks and remembers, he can even "outsmart" his teacher. (Moral 2: Even teachers are wrong sometimes.)
Okay, I'll start again. This is a gun. Is that right?	The children are attentive. Perhaps they are motivated out of a desire to catch the teacher in another mistake, but they are definitely motivated. So the teacher proceeds quickly. The common error beginning teachers make is to win children over and then feel obliged to "talk to them" at length. This technique is poor. The teacher has already spent over a minute winning the children. She does not want to lose them, so she moves very fast.

This is a weapon. This is a gun. This is a weapon.

CHILD D: No it ain't no weapon.

The teacher realizes that she has made a strategic mistake. She has set the children up to catch her errors. Now when she tries to present a new name, the children suppose that she is still carrying on the game. She realizes that she should have introduced the object as a weapon and not as a gun in the first place. She introduced the gun statement first because she felt it would be better to acknowledge the object by the familiar name before introducing the class name.

TEACHER: (Presents pictures of knife, cannon, pistol) This is a weapon. This is a weapon. This is a weapon. These are weapons. Say it with me. This is a weapon. This is a weapon. These are weapons. Let's hear that last one again. Make it buzz. These are weapon<u>zzz</u>.

She does not argue with Child D because she feels that little would be gained, and time would be lost. Instead, she resorts to a familiar presentation pattern that has been used in connection with labels. The use of this presentation, she feels, will demonstrate to the children that she is serious, that the game is over.

(Refers to knife) This weapon is a _____. Who knows?

CHILD E: A knife.

TEACHER: Yes, a knife. Let's say it. This weapon is a knife. Again. This weapon is a knife.

She beat the children to the punch. Before they could raise the objection that the first picture did not depict a weapon but a knife, the teacher presented a full acknowledgment in one statement. She demonstrated that it is, in fact, a weapon. At the same time, she allowed the children to show off their knowledge about the knife.

(Refers to cannon) This weapon is a _____. Who knows?

She phrases her questions so that the children can answer with a single word. Yet, her questions are phrased so that the single-word answer completes the statement "This weapon is a _____." She reinforces the statement even when she wishes to move fast.

CHILD C: Battle.	
TEACHER: That's pretty good. You use this thing in a battle, but it's called a cannon. This weapon is a <u>cannon</u>. Say it everybody. This weapon is a cannon.	She wants the child to know that she approves of the manner in which he is thinking, but that his answer is wrong. She rates his answer as a reasonable one, but follows with a clear correction.
Is this a <u>battle</u>? . . . No, this is <u>not</u> a battle. This weapon is a _____. Come on, tell me.	When a child makes a mistake of this kind, his mistake may be picked up by the other children, and will often be repeated by the child who made it. She therefore labors the identification of the cannon.
CHILDREN A and D: Cannon. CHILD B: (Mumble.)	The teacher notices that Child B is forming statements, but is trying to imitate the sounds made by Child A and Child D.
TEACHER: Boy, I'm really pround of A and D. Do you hear the way they are talking up? And are they ever thinking! I'm really proud of them.	The old adage about catching flies with honey applies to the classroom situation. The teacher could have put Child B on the carpet, which would have taken time and might have disgraced him for only a momentary lapse. If he persists, she will be forced into more direct means, but, for now, she selects the band-wagon motivating technique.
CHILD B: I'm thinking big. CHILDREN A, C, D, E,: Me too. Me too.	
TEACHER: Okay, just keep it up. Here we go. (Refers to pictures) This is a weapon. This is a weapon. This is a weapon.	She reviews the new statements before introducing the new task.
CHILD A: I got a cannon at . . . (stops talking as teacher holds outstretched hand only a few inches in front of child's face).	The summary should be conducted at a fast pace, so that the pieces are brought together and the children see where they are. Interruptions as this point are costly. The child is discouraged when the teacher's hand is placed close to his face--a useful technique.

TEACHER: Here's the rule: (Claps rhythmically) If you use it to hurt somebody, then it's a weapon. Again. If you use to hurt somebody, then it's a weapon. Say it with me. If you use it to hurt somebody, then it's a weapon. One more time. If you use it to hurt somebody, then it's a weapon.	The teacher drills this rule until the children learn it. They have learned in connection with other rules that the teacher will expect them to use the rule in the next set of tasks. They also know that she thinks rules of this kind are important--so important that she will not relent until this one has been learned (assuming that the rule is not beyond them).
And if it's a weapon, what do you do with it? Do you tickle somebody with it? CHILDREN: No. TEACHER: Do you eat with it? CHILDREN: No! TEACHER: Well if it's a weapon, do you use it to hurt somebody? Yes.	The teacher flips the rule so that the child will be prepared to handle task questions of the type "If it's a weapon what do you do with it?" She presents the yes-no questions first because they are the easiest. They represent a simple rephrasing of the question provided by the teacher. The teacher selects interesting examples for this task because interesting examples prompt the children to use the rule.
What do you use a gun for? CHILD A: Shoot.	The teacher immediately presents applications of the rule.
TEACHER: That's good, A. And do you hurt somebody when you shoot him?	The response is correct, so the teacher acknowledges it as a correct response, even though she would rather have a child say "To hurt somebody."
CHILD C: Maybe kill im dead. CHILD D: That hurt.	The children are quite interested, so the teacher allows them to volunteer information.
TEACHER: Yes, you use a gun to hurt somebody. And what's the rule? Come on, think. If you use it to hurt somebody, then it's a _____. CHILD E: (Mumble.)	The teacher attempts to apply the rule. She structures the task so that the children must supply only a single word. They do not respond, which the teacher takes to mean that her presentation left something to be desired. The children were obviously motivated and interested. Presenting the task at this stage was probably premature. The children did not have sufficient practice in saying

	either the regular-order or the reverse-order rule. The teacher decides to adopt a more rigid procedure, starting with the rule.
TEACHER: (Claps and smiles) Oh, it's a tough one. But I can say it. Listen. If you use it to hurt somebody, then it's a weapon. You use a gun to hurt somebody, so what do you know about it? It's a weapon. Because what's the rule? IF YOU USE IT TO HURT SOMEBODY, THEN IT'S A WEAPON. Let's hear it. IF YOU USE IT TO HURT SOMEBODY, _____.	The teacher puts on an act. She becomes entertaining, knowing that the children will need to work with the rule for a few minutes and knowing that such drill can become terribly drab if it is just "Say it after me" activity. She therefore yells and claps and talks as if the rule is <u>fun</u>. She encourages the children to shout with her.
CHILDREN: THEN IT'S A WEAPON.	
TEACHER: I'm thinking of a rifle, and what do you use a rifle for? You use it to POW POW--hurt somebody. AND IF YOU USE IT TO HURT SOMEBODY, _____.	The teacher again presents the gun example, but this time in a much more structured manner. She is establishing a presentational format for processing a number of things. The children are familiar with this general approach.
CHILDREN: THEN IT'S A WEAPON.	
TEACHER: So what do you know about a rifle? Is it a peanut?	This step in reasoning, the teacher realizes, is quite difficult and probably beyond the ability of some of the children in the class. She therefore amends her <u>what</u> question (What do you know about a rifle?) with a more highly structured <u>yes-no</u> question. By presenting the <u>yes-no</u> question, the teacher can prompt the children and increase the possibility of correct answers.
CHILDREN: No, it's a weapon.	
TEACHER: I'm thinking of a cannon, and what's a cannon for? You use to to CA-POW--hurt somebody. And if you use it to hurt somebody, _____	The teacher moves fast. She is using statements that allow her to demonstrate the rule quickly, and she takes advantage of the chance to speed and enliven the presentation.
CHILDREN: Then it's a weapon.	
TEACHER: I'm thinking of a cow, and what is a cow for? Do you use a cow to hurt	The fast, rhythmical presentation tends to encourage repetition, both of the tasks and of answers.

somebody? No. And if you don't use it to hurt somebody, then it is NOT a _____. CHILDREN: Weapon	The children tend to answer every statement with "Then it's a weapon." To prevent this presentation hypnotism, the teacher includes examples of things that are not weapons. These are as useful from a concept-building standpoint as from a presentation standpoint.*

Such a teaching segment would last about two minutes. There is a great deal of progress which has been achieved. The teacher was aware of her objective. She was aware of the need to program the lesson into small enough parts so that the children could move from step to step without facing failure. The situation was rewarding for the children in that they were able to succeed.

The teacher was obviously skilled at planning behavioral objectives and developing implementation strategies. SWCEL has focused part of its program in Task Force I toward helping teachers develop behavioral objectives and implementation strategies. Such a program should be especially beneficial.

Once the teaching objective has been clearly defined, and once the intermediate steps to reaching this objective have been taken, then, remediation can take place.

Certain objectives can be set for the Navajo, Pueblo, and the Rural Spanish American children studied.

Even though an overall trend emerged favoring first, the Rural Spanish American, then the Pueblos and finally the Navajos, the Pueblo and Navajo showed visual channel strength. This means that they

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*Ibid., pp. 105-110.

exhibited the ability to handle information presented visually, remember visual symbols and understand relationships which involve visual associations, better than they could handle auditory information. More emphasis ought to be applied to having these children utilize auditory channels. This means that they should be encouraged to handle word concept, grammar and verbal expression.

All groups fell well below Anglo norms on the English Language Hearing Vocabulary dimension. A major emphasis on English language skills development ought to be encouraged. The SWCEL materials, developed in the SWCEL Task Force II thrust, can be utilized as part of the strategy designed to overcome this deficit in English Language Hearing Vocabulary. These could also provide a method of attack designed to overcome the problem of auditory channel deficits. Bereiter and Englemann's approach also may prove useful.

Entry skills of the Indian groups were markedly low. Also, the home environment process characteristics for these children reflected a lack of adequate parental emphasis on processes necessary for generating school success in their children.

Efforts to communicate with the parent must be made by school people. Parents should be taught how to use report cards, how to reward their children for effort in school, how to develop attitudes and behavior in their children which will facilitate the work of the school. The strategies necessary to accomplish this can be worked out at the school district level.

A decision should be made to move in the direction of enlisting parental support by the school district. Building principals, counselors,

and teachers can be involved in the planning and implementation of such a program of adult education. SWCEL is providing assistance in the development of such an adult basic education program and is considering a comprehensive parent-school-total community involvement project for future development.

SUMMARY

SWCEL is aware of the need to develop special educational programs for children in the Southwest. As part of its plan to assist children of culturally disadvantaged background, the Laboratory sponsored a research project aimed at describing some of the characteristic learning styles of these children and some of the environmental factors which contribute to school success. A general trend was found favoring the performance on a variety of psychometric instruments of one group over the other groups. Generally, the Rural Spanish American first-graders studied performed higher than the Pueblo first-graders who, in turn, performed higher than the Navajo first-graders.

Certain important exceptions to this trend emerged. Though the Rural Spanish American children were more adept at using auditory channels of communication, the American Indian groups showed unexpected strength in handling information through visual channels. The results of a variety of tests were presented. It was suggested that the apparent deficit in the American Indian group processing information requiring auditory channels could be remedied using an approach similar to that suggested by Bereiter and Englemann. An example of this approach was given. It was the writer's view that either a cognitive

or a behavioristic approach could be taken insofar as implementing teaching strategies. Stress was placed on utilizing approaches and materials for teaching which have been developed at SWCEL. Finally the value of parent involvement was stressed.

In conclusion, the educational needs of the culturally divergent Southwestern child are great. Changes in their curriculum to improved English language usage should be a fundamental goal of the educational establishment. The major thrust of the Southwestern Cooperative Educational Laboratory--aimed at developing English language arts skills in primary grades for the culturally divergent--seems to be well directed. With such efforts, perhaps the collage of social crisis presented in the introduction will emerge into a picture of social harmony.