

## DOCUMENT RESUME

ED 124 678

88

UD 016 138

AUTHOR Gordon, Edmund W.; And Others  
 TITLE Armijo Bilingual Bicultural Program (West Las Vegas, New Mexico).  
 INSTITUTION Columbia Univ., New York, N.Y. ERIC Clearinghouse on the Urban Disadvantaged.  
 SPONS AGENCY National Center for Educational Communication (DHEW/OE), Washington, D.C.  
 PUB DATE 72  
 GRANT OEG-71-3946  
 NOTE 41p.; For full report, see ED 099 458; Part of project entitled Preparation of Publications on Progress in Compensatory Education and Desegregation Programs; parts of the bibliography appended may reproduce poorly; Best copy available

EDRS PRICE MF-\$0.83 HC-\$2.06 Plus Postage.  
 DESCRIPTORS Biculturalism; \*Bilingual Education; Bilingual Students; Compensatory Education Programs; Elementary School Students; Federal Programs; Grade 1; Grade 2; \*Mexican Americans; \*Open Plan Schools; \*Primary Grades; \*Program Descriptions; Spanish Speaking  
 IDENTIFIERS \*Elementary Secondary Education, Act Title III; ESEA Title III; \*New Mexican (West Las Vegas)

## ABSTRACT

The Armijo Bilingual Bicultural Demonstration Center has just completed its second year of operation. The program, which offers bilingual and bicultural instruction in an open classroom for 154 first and second graders, is funded chiefly through Elementary Secondary Education Act Title III funds. Students are taught reading skills, mathematical principles, and scientific concepts in Spanish, the dominant language of the predominantly Mexican-American student body. English dominant children, taught in English, receive instruction in Spanish Language Arts. The use of the open classroom permits highly individualized or small group instruction in homogeneous or heterogeneous groupings. The program is exemplary for several reasons. Most important is its equal emphasis on instruction in both Spanish and English language and culture. The bilingual emphasis eradicates the stigma children from minority groups have traditionally experienced in American education. The program has also achieved the behavioral objectives set forth at its inception as well as those in the Spanish Curriculum Development Center materials and in the progress charts of the Palomares Human Development Series.

(Author/JM)

Documents acquired by ERIC include many informal unpublished materials not available from other sources. ERIC makes every effort to obtain the best copy available. Nevertheless, items of marginal reproducibility are often encountered and this affects the quality of the microfiche and hardcopy reproductions ERIC makes available via the ERIC Document Reproduction Service (EDRS). EDRS is not responsible for the quality of the original document. Reproductions supplied by EDRS are the best that can be made from the original.

ED124678

ARMIJO BILINGUAL BICULTURAL PROGRAM  
(West Las Vegas, New Mexico)

U S DEPARTMENT OF HEALTH  
EDUCATION & WELFARE  
NATIONAL INSTITUTE OF  
EDUCATION

THIS DOCUMENT HAS BEEN REPRODUCED EXACTLY AS RECEIVED FROM THE PERSON OR ORGANIZATION ORIGINATING IT. POINTS OF VIEW OR OPINIONS STATED DO NOT NECESSARILY REPRESENT OFFICIAL NATIONAL INSTITUTE OF EDUCATION POSITION OR POLICY.

BEST COPY AVAILABLE

Information Retrieval Center on the Disadvantaged  
Horace Mann-Lincoln Institute  
Teachers College, Columbia University  
New York, New York 10027

1972

This document was produced as part of the project entitled Preparation of Publications on Progress in Compensatory Education and Desegregation Programs which was funded by the U.S. Office of Education, Dissemination Center for Educational Communication (OEG-71-3946). Points of view or opinions expressed in this material do not necessarily represent the official view or opinions of the U.S. Office of Education.

Edmund W. Gordon, Project Director  
Carolyn Ralston Brownell, Project  
Coordinator  
Jenne K. Brittell, Project Editor

## Preface

In efforts at improving the quality of education and at justifying expenditures for compensatory education and school desegregation, we are increasingly dependent upon the data of evaluative research. Yet the data from many of these evaluation efforts conducted over the past twelve years are confused and inconclusive. The findings from these studies are sometimes contradictory. The interpretations have become the subject of considerable controversy, particularly as these findings and interpretations appear to contradict some of our cherished assumptions concerning education and educability. The lack of clarity with respect to the meaning of these data and the value of such programs is in part attributable to a variety of problems in the design and conduct of evaluative research. Among these problems, increasing attention is being called to the fact that there are sparse data concerning the specific nature of program interventions. These tend to be reported under labels or brief descriptions which provide little information relative to the nature and quality of the treatments to which the pupils studied are exposed. In an effort at gaining a better understanding of the content and nature of some of these programs, this project was directed at describing selected programs thought to be exemplary of quality, progress, trends or problems in compensatory education and school desegregation. Ten compensatory education programs and two school desegregation programs were selected for detailed description.

The principal procedures utilized in this study included documentary

analysis, direct observation of programs and interviews with selected informants. The tasks to be accomplished included identification and selection of projects to be studied, collection of all available data on each project considered, field study of promising candidate projects, preparation of descriptive reports, final selection and reporting.

Following is the description of one of these selected programs.

For the complete report of this project see document number ED 099 458 in the ERIC system.

Designed to

develop literacy skills and conceptualization in Spanish  
and English  
build self-confidence  
develop Hispanic curriculum materials  
foster strong home-school relationships

Through:

a bilingual, bicultural program of instruction in which basic concepts are taught in the dominant tongue, that uses USOE's Spanish Curriculum Development Center series, the Miami Linguistic series, and the Palomares Human Development Series.

open classroom concepts which permit individualized, small group and large class instruction in either homogeneous or heterogeneous arrangements

multi-media instruction (including listening stations, overhead projector; flannel board stories and manipulative flannel objects; Spanish and English films; filmstrips, tapes, and records in Spanish and English used singly and in combination; manipulative self-help instructional material for interest centers; commercial instructional games and audio-visual self-teaching machines)

Armijo Bilingual Bicultural project has resulted in

the achievement of specified academic and behavioral objectives  
the creation of a bilingual, bicultural learning environment  
more enthusiastic, involved students  
closer parent-school ties

## SUMMARY

The Armijo Bilingual Bicultural Demonstration Center in West Las Vegas, New Mexico has just completed its second year of operation. The program, which offers bilingual and bicultural instruction in an open classroom for 154 first and second graders, is funded chiefly through ESEA-Title III funds. Recent research on cognitive learning has demonstrated that a child should be taught basic concepts in his native language so as to avoid linguistic and cognitive confusion and thus possible academic retardation. Thus children at Armijo are taught reading skills, mathematical principles, and scientific concepts in Spanish, the dominant language of the predominantly Mexican-American student body. English dominant children, taught in English, receive instruction in Spanish Language Arts. The use of the open classroom permits highly individualized or small group instruction in homogeneous or heterogeneous groupings.

The program is exemplary for several reasons. Most important is its equal emphasis on instruction in both Spanish and English language and culture. Not only are the Spanish-speaking children taught English; the English-speaking children learn Spanish as well. Such bilingual emphasis eradicates the stigma children from minority groups have traditionally experienced in American education. The program has also achieved the behavioral objectives set forth at its inception as well as those in the Spanish Curriculum Development Center materials and in the progress charts of the Palomares Human Development Series. Moreover, the children exhibit a high level of

interest and are actively involved in the learning activities.

Other exemplary characteristics of the Armijo bilingual, bicultural program are : the culturally oriented curriculum; the specific but flexible curriculum guidelines; the effectiveness of open classroom concepts and grouping strategies; the in-service training in open classroom and bilingual instruction techniques; the Spanish language materials written especially for American Spanish-speaking children; the teachers' resourcefulness, dedication and ability; the supervision and organization of the Project Director; the effective utilization of aides; and the inter-staff cooperation and frequent evaluation of objectives. Staff communication and cooperation are aided by close ethnic and social ties and parental and community involvement.

Although the school's limited enrollment, the staff's cultural homogeneity and the population's stability (neither migrant nor transient) undoubtedly contribute to the program's effectiveness, Armijo's concrete curriculum guidelines, behavioral objectives, commercial and teacher-developed instructional materials and open classroom teaching strategies could be successfully adapted to other bilingual programs.

#### WHERE

Part of the community of Las Vegas (pop. 17,900), West Las Vegas is the poorer, older section peopled primarily by Mexican Americans



who have resided there for generations. The town is in the northern, mountainous region of New Mexico, 60 miles from Santa Fe and 120 miles from Albuquerque. Las Vegas is the home of Highlands University (a small state-supported institution with 2400 students), of a state hospital and a mental retardation facility. While a small group of white professionals are affiliated with these institutions, the vast majority of the labor force are Mexican Americans employed in construction, education (teachers, aides, clerks), hospitals and filling stations. Although housing is less costly than elsewhere, the modal income is only \$5600.

### WHO THE STUDENTS

Because the town of Las Vegas is actually a fusion of the two earlier communities, East and West Las Vegas, two school districts remain. In addition to the Armijo Demonstration Center, West Las Vegas has a high school, a junior high school, a rural combined junior high-elementary school, and four elementary schools. The 204 students who participated in the center program in 1972-73 are all first, second, and third graders. Most students are from low-income homes and approximately 70% of the children's families are on welfare. They are bussed from various locations. Although Spanish is the dominant language, most first graders who enter the program are somewhat bilingual because approximately 90% have had some Headstart experience.

The Armijo BBC Project is staffed by a director, clerk, media specialist, Spanish specialist, music specialist (2 days a week for a half hour each day), eight teachers and eight teacher aides. The staff are all Mexican Americans. The student-teacher ratio is approximately twelve to one. If the student teachers, who teach for three months are included, the ratio of students to adults is eight to one.

#### WHEN

Prior to the initiation of the bilingual, bicultural center in the fall of 1970, West Las Vegas had several other government-funded projects, including Headstart, a Title III pilot project in special education and a Title I English as a Second Language project. At present there is another bilingual project in West Las Vegas funded under a Title VII grant and encompassing only first and second grade in the two elementary schools. Unlike Armijo, this project primarily utilizes indigenously - developed materials, a self-contained classroom model, and instruction in English in the morning and Spanish in the afternoon. On occasion both projects share consultants and special speakers. The proposal for the Armijo Bilingual Bicultural Demonstration Center was written by Mrs. Mela Leger, the Center's Director, who was formerly coordinator of the Title I English as a Second Language Project (which utilized the Miami

Linguistic Series). Assisted by Henry Pasqual of the State Department of Education and the center's staff, Mrs. Leger worked out the program design.

### WHY

The program was instituted to provide Spanish-speaking children with the opportunity to learn in an environment which capitalized on the cultural and linguistic milieu in which they had been reared. Recent educational literature is replete with instances of children who erroneously have been considered retarded as a result of testing which they could not understand because of language and cultural difficulties. Studies in cognitive learning have shown that a child should learn basic concepts in his dominant tongue in order to avoid linguistic and cognitive confusion; such confusion can produce frustration and actual academic retardation. The objectives of the program of the Armijo Bilingual Bicultural Demonstration Center are directed toward the development of academic competence and self-confidence.

### WHAT

Several of the current program objectives were set forth in the initial proposal; others have been added or revised as a result of the

first year experience and new developments:

1. Development of literacy skills and concept development - in Spanish and English
2. Development of positive self-image through a planned program of instruction for effecting changes in the affective domain
3. Utilization of a multi-media approach
4. Role as a demonstration center for the immediate area in the field of bilingual education and the newer concepts of classroom organization.
5. Development of strong home-school relationships
6. Development of Hispanic curriculum materials
7. Individually prescribed instruction through the staff of the center as well as volunteer help from parents, New Mexico Highlands University students, high school and junior high students
8. Development of social studies content in Spanish the first year and the addition of other subject areas in the second and third years (original objective); this had been revised to include the development of all subject matter in both Spanish and English.
9. A pilot testing center for USOE's Spanish Curriculum Development Center materials. Armijo is one of 20 centers throughout the United States which tests and reports to the Spanish Curricula Development Center of the United States Office of Education.

#### HOW

The classrooms of the Armijo Demonstration Center are brightly and imaginatively decorated with bulletin boards and children's work.

The building is divided into three main areas--the cafeteria, which is also used for classes, and two wings made up of one large classroom each. The Highlands University demonstration class meets at the university all day, returning to Armijo for lunch. All students eat breakfast and lunch at school. For those who can afford to pay, breakfast is \$.05 and lunch is \$.25. Hot, varied, nutritional, and tasty, the meals undoubtedly are largely responsible for the high energy level observed in this student population. While the school has only limited funds to allocate for dental and medical services, the community, including local church groups and the Kiwanis, contribute, and the school strives to be aware of, and meet, medical needs. For a child who had to undergo a series of heart operations, the school parents raised two hundred and fifty dollars through a bake sale.

The Center achieves its objectives through several interrelated techniques: the use of open-classroom concepts; a bilingual, bicultural program with varied, flexible curricula and instructional materials; and the employment of various media aids.

The first, second, and third grades at Armijo are divided into groups of approximately 50 students, and a combination class of 25 first and 25 second graders who spend the day in the laboratory classroom at Highlands University. Each single grade group, and the combined group, occupies a large classroom area. Each group has

two teachers and two teacher aides who work closely together and share instructional duties.

The classrooms are divided into 8 activity or interest areas. Children work in groups either independently or under the guidance of a teacher or aide. Under this classroom arrangement, the children move from one activity center to another every 20 minutes. The children memorize their individual schedules and move on their own. Students are grouped homogeneously for some activities (for example, a slow math group) and heterogeneously for others (working in notebooks independently). The children are eager to participate, absorbed in their activities, and able to work independently yet cooperatively.

#### HOW (cont'd) BILINGUAL BICULTURAL CURRICULUM

The core of the curriculum content is the child, his family, and his world. The children's learning activities in language arts and social studies address such questions as "Who are we?" "What are our needs?" and "What are our resources?" To deal with these questions the teachers utilize the Palomares Human Development Series, which focuses on feelings, interpersonal relationships, self-mastery, and realization; the Spanish curriculum materials developed by the U.S. Office of Education; the Miami Linguistic Series; and local teacher-developed materials which are oriented toward local culture.

Armijo was chosen as one of twenty bilingual programs across the country to pilot test instructional materials in Spanish recently developed by the Spanish Curriculum Development Center, part of the Bilingual Education Programs Branch of the U.S. Office of Education (Title VII). The Center was established to provide the growing number of bilingual programs with desperately needed instructional materials which reflect the special needs and interests of Spanish-background children across the nation.

The materials include Spanish language arts, fine arts, science, math, social studies, and Spanish as a second language for non-speakers of Spanish. Field trial centers are being monitored by two field associates and the administrative coordinator. The centers are also being visited by the project manager, the evaluation coordinator, and the evaluation associates. The materials were developed by a staff of 28 who represent the ethnic and linguistic groups involved (primarily Mexican American, Puerto Ricans and Cubans as well as native speakers of English) and reflect geographic areas in which bilingual programs are distributed (California, New Mexico, New York, Illinois, and Florida). The development of these materials represents the only comprehensive attempt to provide a full curriculum in Spanish adapted to the needs of such target populations. The curriculum outlines appear to provide sound yet flexible instructional activities, and the Armijo teachers are pleased with them and rely on them. (A detailed description of the center and the materials is included in

Children learn reading skills, mathematical principles, and scientific concepts (geometric forms, measurement, time units) in their dominant language, Spanish. The handful of English dominant students, mostly the children of Highlands University faculty, are taught these skills and concepts in English with supplementary instruction in Spanish language arts. Spanish dominant children are taught English as a second language with the Miami Linguistic Series and the Peabody language development kits. They have a daily period in a mobile unit reading laboratory in which they learn Spanish language arts. Spanish Curriculum Center materials are used for language arts instruction for both English dominant and Spanish dominant children.

Reading skills are taught through a variety of strategies: phonetically via sight words and through the language experience approach. The teaching staff appears to rely heavily on the language experience approach in which children talk about their experiences and then write them down for other children to read. The Armijo bulletin boards are covered by cooklets written and decorated by the children in both languages.

Two sets of materials are used to teach math and science. The SRA series is used in English to teach computational skills on a strictly individualized basis. Small group instruction and the Spanish



Curriculum materials are used to teach mathematical and scientific concepts.

### MULTI-MEDIA LEARNING

The SCDC materials also utilize music and fine arts in the bilingual, bicultural program. To meet this need, the Armijo center employs a music specialist and a fine arts instructor, who is a student teacher from Highlands. A music teacher comes twice weekly for half-hour sessions. With cassettes of taped songs in Spanish and English which are included in the SCDC kits, he works on performance objectives outlined by the SCDC (see APPENDIX A). During the period between his visits the teachers sing the songs and work on the objectives introduced by the music teacher.

The teachers utilize a variety of media in their instructional patterns. These include flash cards with translation, spelling, and arithmetic exercises which are laminated so that they can be reused. Filmstrips in which both languages are used are incorporated into the language experience exercises. A self-teaching audio-visual machine is on loan from the district.

### STAFF

The staff of the Armijo Bilingual Bicultural Demonstration

Center includes a director; clerk; media, Spanish and music specialists; eight teachers; and eight teacher aides. The teaching staff, all bilingual Mexican Americans, was chosen by the project director from other schools. While they felt the changeover to an open classroom difficult at first, they are enthusiastic, resourceful and extremely pleased with the children's high level of engagement.

Inservice training in bilingual education and in the technique of open classroom is provided for both teachers and aides. The entire staff, including the project director, attends one night class weekly. Although the aides and teachers attend different sessions, the course substance is very similar. During the first year of its operation, Armijo used consultants for inservice training. The consultants came from ESL, Southwestern Council Education Laboratory and the University of New Mexico. Palomares, the author of the Palomares Human Development Series, did the most extensive consulting and training with his materials. During 1971-1972, inservice training was provided by the Highlands University Department in Bilingual Education. Consultants also came from the Spanish Curriculum Development Center to observe the use of their materials. A Title III Teacher Training Center in bilingual education for the state was initiated at Armijo in 1972-1973.

Teachers and aides work closely together. All of the aides are studying to become teachers. Very professional teamwork characterizes this relationship and probably is responsible for the

high morale among aides. The teachers share instructional duties with the aides and also consult them to a lesser degree in planning.

Unfortunately the teachers do not have any time during the day for planning. The director of the program is largely responsible for keeping the program on target.

### WHO (cont'd) PARENTS

Although parents have helped with special school events, plays, festivals, and the construction of shelves and playground equipment, their impact has been restricted to such assistance. In the past, they have not participated in actual policy and curriculum making decisions. However, the school puts out very frequent memos that inform parents of school events, special visits by outsiders, speakers and topics. These have been very effective in motivating parents to learn more about what they can contribute toward their children's education.

At a PTA meeting, several parents canvassed expressed some uneasiness about the seeming lack of structure and authority in the open classroom. They admitted that this hesitancy could be a cultural bias and expressed pleasure that their children much preferred school under this system. The project director appears to have detected this parental apprehension and has scheduled university persons and other speakers to review educational ideas at PTA meetings.

The Board of Education members for the West Las Vegas school district are mostly Mexican American and the Superintendent, Ray Leger, is the husband of the Center's director. - Because it is a small town, there seems to be a close network of communication among the board members and among the school staff. However, the demonstration center has received surprisingly little coverage in the local paper.

#### HOW (cont'd) COSTS

Title III of ESEA provides 95 percent of the funds for the Armijo project, and the state, the remaining 5 percent. In addition, the project utilizes audio-visual equipment which the school district and Highlands University have purchased with Title I funds.

The estimated total cost of the project for the first three years is \$300,000. Budget for 1970-71 was \$65,000; for 1971-72, \$80,000; and for 1972-73, it is estimated to run \$88,000. The cost per project pupil is approximately \$600 per year (as opposed to a per pupil cost in the West Las Vegas public schools of \$365 per year). If the Armijo Demonstration Center maintains its present standards of performance, New Mexico will likely assume funding of the project at the expiration of the federal allocation.

WHAT (cont'd) EVALUATION

To evaluate the effectiveness of the program in promoting the academic and psychological growth of the pupils, a series of objectives were set forth and progress measured at the end of the 1970-71 school year. As can be seen from the attached evaluation (Appendix B), while many of the objectives were achieved, not all were achieved to the level anticipated at the program's inception. However, a start has been made and the trends appear to be continuing.

EFFEC TIVENESS

This project proceeds from the assumption that effective learning in a bilingual community not only requires that the educational program be bicultural as well as bilingual, but that bilingual competence should be the goal common to all who participate in the program. Thus, the principal features of this project in West Las Vegas, New Mexico involve formal and informal language instruction in Spanish for English-dominant children; in addition, a heavy representation of elements from both cultures are incorporated in the total school program. This concept is praiseworthy. However, it is a very difficult concept to implement. Implicit to this program is the concern with equal respect for both languages and cultures. Yet, because it exists in a larger, English-dominant culture, the extent to which such parity is achieved is highly questionable.

This extends from the difficulty of finding teachers who are not only able to use both languages effectively, but who have parity of status, to the problem of community support for the development of facility in Spanish for English-speaking children. One of the implicit objectives of the program is to enhance self-concept in Spanish speaking as well as English speaking children, yet it is hard to avoid the premium which attaches to mastery of English and difficult to provide continuous reinforcement of Spanish for children who return to English-speaking homes. However, given the low percentage of Anglos in this program, the rewards in the natural setting for mastery of Spanish may be greater.

In addition to this set of problems, this model places heavy responsibility on the teacher for bilingual competence and a burden of work that many may regard as excessive. The task of developing and organizing materials in two languages and of continuing concern for ensuring that neither the language usage nor the processes of instruction demean the lower status language involves considerably more work than does teaching in a single language.

Since the project correctly perceives personal-social development (self-concept, self-confidence, self-realization) as goals of the program, as well as facilitators of language competence, a significant auxiliary element involves the use of the Palomares Human Development Series.

It is through this work that teachers provide complementary learning experiences in personal-social development. The combined efforts represent a major undertaking; nonetheless, they appear to be implemented with a high degree of effectiveness. The exemplary qualities of this program are reflected in its specificity of guidelines, clarity of objectives, appropriateness of materials, flexible organization of instruction, in-service training of teachers and aides, and parental involvement and enthusiastic dedication of its teachers. The effective integration of these varied elements into a single program would represent a major achievement in any school district. The fact that it has been substantially achieved in a small community like West Las Vegas may be due to factors idiosyncratic to this community. But, the concepts and spirit reflected in this program are worthy of consideration by schools struggling with the problems of education for bilingual populations.

## APPENDIX A

### SPANISH CURRICULUM DEVELOPMENT CENTER

The Center is still in the process of producing, field testing, and revising 48 multi-disciplinary multimedia Spanish curricula kits, 16 of which will be for first grade, 16 for second grade, and 16 for third grade. Each kit will be designed as a two-week unit, and will contain materials for teachers and materials for pupils conducive to the development of six strands in Spanish: (1) Spanish language arts vernacular, (2) social science, (3) fine arts, (4) science, (5) mathematics, and (6) Spanish as a second language. The materials for each strand will be so designed that they may be used independently or in combination with the materials for other strands in the kit.

The Spanish language arts vernacular strand in each kit will extend the language that the Spanish-dominant children bring from their homes through structured and unstructured oral language experiences designed to develop Standard Spanish, at the same time recognizing and developing respect for regional dialects. It will also provide structured and unstructured reading experiences designed to systematically develop (1) Spanish decoding skills, (2) skills prerequisite to effective use of reading in the content areas, and (3) habits and tastes in the reading of Spanish literary-type materials.

The social science strand in each kit will be designed to help the learners discover basic generalizations of the social sciences



on an elementary level and familiarize the learners with the process of inquiry so they may independently discover and order the rapidly changing world around them. It will give major importance to the diversity of socio-economic and cultural make-up of the target groups for which it is meant, and it will provide for such differences at the local level. The content will be organized around high level abstractions, such as change, interdependence, and differences.

These abstractions will serve as main threads throughout the strand, connecting important generalizations taken from the social sciences, such as "individuals belong to many groups and therefore occupy several different statuses". Specific facts will be selected to develop these main ideas. Concepts will be designed to be revisited systematically, resulting in a spiral of concept development. To aid the pupils in arriving at the social science concepts, the social science strand will utilize teaching strategies designed to help them organize large bodies of data and analyze similarities and differences or cause effect relationships. Also utilized will be strategies to explore the affective domain of feeling, attitudes, and values.

The fine arts strand will focus on music and art. The music portion will be so designed as to reflect a broad experience in a wide range of musical traditions from the Spanish-speaking world.

The science strand in each kit will be organized around the basic process of observing, using time/space relationships, classifying, using numbers, measuring, communicating, predicting, and inferring.

## OBJECTIVES--SECOND GRADE

PROGRESS IN REACHING  
OBJECTIVES

1. Sixty five percent of the students will read All Systems Go, last book of the Miami Linguistic Series, and perform 90% of the reading and study skills required for that particular book.

2. Fifty percent of the students will write creatively short paragraphs in both languages based on their experiences or on the reading selections they have read.

## 3. MATHEMATICS

Seventy-five percent of students will be able to do mathematical computations using two and three digit problems.

4. Fifty percent of the students will demonstrate ability to figure out mathematical process when given four story problems.

## 5. SELF-CONCEPT

Development of positive self-image through a planned program of instruction for effecting changes in the affective domain.

50% of the second year students are at the midpoint in the reading selections of the Miami Series so it is presumed they will complete the final book and perform study skills as required in that book.

50% of second year students are currently writing creative stories in English and Spanish based on learned vocabulary and structures while drawing on their experiential background.

50% of the students are able to do two and three digit computations.

50% of the students can figure out the mathematical process when given four story problems.

95% of the students are making satisfactory progress in the affective domain as measured by the Human Development Rating Scales kept on each child.

## APPENDIX B

### SAMPLES OF 1971-72 OBJECTIVES

#### OBJECTIVES--FIRST GRADE

1. Seventy percent of students will demonstrate command of phonology of both languages by approximating speech of native speakers of the language as measured by sound mimicry tests and tape recordings of students.

2. Seventy-five percent of the students will write simple sentences using words from their reading vocabulary in both languages.

3. SOCIAL STUDIES  
Seventy-five percent of the students will be able to identify and summarize some of the human needs and the importance of having human resources.

4. MATHEMATICS  
Eighty percent of the children will demonstrate understanding of sets by using that concept in addition.

5. Seventy percent of the students will be able to describe the vocabulary of modern mathematics

#### PROGRESS IN REACHING OBJECTIVES.

taped dialogue at the beginning of school and one at this time indicates that 90% of the students speak well in both languages, approximating the speech of the native speaker of the languages.

75% of the children can write simple sentences utilizing vocabulary from reading series, employing manuscript orthography in English and cursive orthography in Spanish at the midway point in the school year.

75% of first and second year students can express orally his role in the classroom and in the family, his wants and needs in the classroom and in the family and his resources in the classroom and in the family.

80% of the children demonstrate basic operations of addition and subtraction using sets having from 1 to 10 elements.

70% of the students can name and describe properties and geometric figures in both English and Spanish. They can demonstrate their knowledge

Skills for successful completion of each process will be developed and revisited in increasing depth. For example, skills inherent in the process of classifying are those of identifying, naming, and ordering. These skills will be revisited several times in various activities before an actual classification activity takes place. The program will utilize these basic processes when dealing with content material from mathematics and social science as well as science, and will utilize the teaching strategies indicated in the social science strand above.

The mathematics strand will develop concepts typified by "modern math" programs as a whole, including such topics as sets, simple geometry, the number line, measuring, addition and subtraction, and simple chart construction.

The Spanish-as-a-second-language strand will provide English-dominant children structured and unstructured oral language experiences designed to develop oral Spanish, and will phase the English-dominant children into Spanish reading once the basic decoding skills have been mastered in English. The linguistic target features of this strand will be identified through contrastive analysis, but the sequencing of target features will be strongly influenced by the sequencing of the content from the subject matter areas.

OBJECTIVES--FIRST GRADE  
(cont'd)

such as sets, subsets,  
geometric figures in both  
languages.

PROGRESS IN REACHING  
OBJECTIVES (cont'd)

of sets and sub-sets by the cognitive  
and psychomotor performance of  
addition and subtraction of elements  
up to ten.

I. Bilingual Instruction

- Andersson, T. "Bilingual Education: The American Experience." Modern Language Journal, 55 (November 1971), 427-440.
- Andrade, Ernest. "Bilingual - Bicultural Education---An Answer." Journal of Educational Research, 2 (February 1971), 27-30.
- Ballesteros, D. "Toward an Advantaged Society: Bilingual Education in the 70's." National Elementary Principle, 50 (November 1970), 25-28.
- Bell, Paul. "Bilingual Education---A Second Look." TESOL Newsletter, v5, n3-4, September-December 1971, pp. 29-30.
- Bendon, B. H. "Useful Current Materials for ESL, FLES, and Bilingual Classes." Instructor, March 1972, 36-37.
- Beritez, M. "Bilingual Education: The What, The How, and The How Far." Hisoania, 54 (Summer 1971), 499-503.
- Bolinger, D. "Let's Change Our Base of Operations." Modern Language Journal, 55 (March 1971), 148-156.
- Carlisle, J. "Needs in Bilingual Education." Hisoania, 54 (May 1971), 309-310.
- Cerrow, E. "Comprehension of English and Spanish by Preschool Mexican-American Children." Modern Language Journal, 55 (May 1971), 299-306.
- Cleland, D. M. "Two-language Instruction." Times Education Supplement, October 23, 1970, 2892: 26.
- Coles, Robert. Children of Crisis: A Study of Courage and Fear. Boston: Little, Brown, and Company, 1967.
- Coles, Robert. Teachers and the Children of Poverty. Washington, D. C.: The Potomac Institute, Inc., 1970.
- Cordova, H. L., and Rivera, F. "Curriculum and Materials for Bilingual, Bicultural Education." National Elementary Principle, 50 (November 1970), 56-61.
- Forbes, Jack D. Mexican Americans: A Handbook for Educators. New York: Horace Mann-Lincoln Institute, Teachers College, Columbia University, ERIC.
- Friedenberg, Edgar Z. Coming of Age in America. New York: Random House, 1965.
- Gomez, S. "Bilingual Education in Texas." Educational Leader, April 1971, 757.
- Guerra, H. "Educating Chicano Children and Youths." Phi Delta Kappan, 53 (January 1972), 313-314.
- Heller, Celia S. Mexican American Youth: Forgotten Youth at the Crossroads. New York: Random House, 1966.
- Henry, Jules. Cultura Against Man. New York: Random House, 1968.

- Keith, M. T. "Sustained Primary Program for Bilingual Children!" International Reading Association Conference Papers (Reading Goals for the Disadvantaged), 14, (1970), 262-277.
- Kobrick, J. W. "Compelling Case for Bilingual Education." Saturday Review, April 29, 1972, 314-317.
- La Fontaine, Hernan. "Paraprofessionals: Their Role in ESOL and Bilingual Education." TESOL Quarterly, 5 (December 1971), 309-314.
- Levenson, S. "Language Experience Approach for Teaching Beginning Reading in Bilingual Education Programs." Hispania, 55 (May 1972), 314-319.
- Lewis, Oscar. The Children of Sanchez: Autobiography of a Mexican Family. New York: Random House, 1961.
- \_\_\_\_\_. Five Families: Mexican Case Studies in the Culture of Poverty. New York: Basic Books, Inc., 1959.
- Magana, C. L. "Some Thoughts for Improving the Effectiveness of Bilingual Programs." Hispania, 55 (March 1972), 109-110.
- Maldoc, A. M., and Roberts, A. H. "Bilingual Education: A Special Report from CAL/ERIC." Elementary English, 47 (May 1970), 713-725.
- Maslow, Abraham L. Motivation and Personality. Scranton, Pennsylvania: Harper and Row, 1970.
- McNamara, John. The Bilingual's Linguistic Performance. New York: Horace Mann-Lincoln Institute, Teachers College, Columbia, ERIC.
- McWilliams, Carey. North from Mexico. New York: Greenwood Press, Inc., 1968.
- Mexican-American Study Project. Division of Research, Graduate School of Business Administration. Los Angeles: University of California, 1967.
- Nadler, S. "Language, the Vehicle; Culture, the Content: Southwest Educational Development Laboratory: Early Childhood Learning System." Journal of Research and Development in Education, 4 (Summer 1971), 3-10.
- Nadler, S., and Sebeña, P. "Intervention Strategies for Spanish-speaking Preschool Children." Child Development, 42 (March 1971), 259-267.
- Ornstein, J. "Sociolinguistic Research on Language Diversity in the American Southwest and Its Educational Implications." Modern Language Journal, 55 (April 1971), 223-229.
- Ortego, P. D. "Schools for Mexican-Americans: Between Two Cultures." Saturday Review, April 17, 1971, 62-64.
- Ramirez, M. "Bilingual Program Bandwagon and the Psychodynamics of the Chicano Child." Claremont Reading Conference Yearbook, 34 (1970), 68-72.
- Robinson, P. F. "Math for Mexican-Americans." Instructor, May 1970, 90.

- 3-
- Roeming, R. F. "Bilingualism and the National Interest." Modern Language Journal, 55, (May 1971), 314-317.
- Roscoe, Carole. "Developing Instructional Materials for a Bilingual Program." TESOL Quarterly, 6 (June 1972), 163-166.
- Rosen, C. L., and Ortega, P. D. "Resources: Teaching Spanish-speaking Children." Reading Teacher, 25 (October 1971), 11-13.
- Samora, Julian. La Raza: Forgotten Americans. Notre Dame: University Press, 1966.
- School and Society. "Bilingual Education Programs," 100 (Summer 1972), 283.
- Simpson, Lesley Eyrd. Mary Mexicos. Berkeley: University of California Press, 1964.
- Steiner, Stan. La Raza: The Mexican Americans. New York: Harper and Row, 1970.
- Vasquez, Richard. Chicano. New York: Doubleday, 1970.



## II. Individualized Instruction

Allen, D. S. "How You Can Individualize Instruction Right Now." Nation's Schools, April, 1965.

ASCD Year Book, "Individualizing Instruction," National Education Association, 1964.

Audio-visual Instruction. "Self Instruction and Information Retrieval Systems; Symposium," 0 (Spring 1970), 6-39.

Auxter, D. "Teacher of Individually Prescribed Instruction in Perceptual Motor Development." JOURNAL, 42 (June 1971), 41-42.

Bartol, E. V. "Initiating a Self-directed Learning Program in the Classroom." Education, 91 (February 1971), 247-249.

Bishop, Lloyd K. Individualizing Educational Systems. New York: Harper and Row, 1971.

Bloom, Benjamin S. (Ed.). Taxonomy of Educational Objectives: Handbook I: Cognitive Domain. New York: McKay, 1956.

Burns, R. "Methods for Individualizing Instruction." Educational Technology, 11 (June 1971), 55-56.

Childhood Education. "Designing Tomorrow's Schools Today: The Multi-Sensory Experience Center," February 1971.

A Climate for Individuality. Statement of the Joint Project on the Individual and the School. Washington, D. C.: American Association of School Administrators, 1965.

Clymer, T., and Kearney, H. C. "Curricular Instructional Provisions for Individual Differences." Individualizing Instruction. Edited by H. B. Henry. Sixty-first Yearbook (Part I) of the National Society for the Study of Education, Chicago: University of Chicago, 1966.

Coats, Arthur, and Sayce, Donald. Individual Behavior. New York: Harper and Row, 1959.

Cutts, Norma and Fosdy, Nicholas. Provision for Individual Differences in the Elementary School. New Jersey: Prentice-hall, 1960.

Dall, R. (Ed.). Individualizing Instruction. Washington, D. C.: Association for Supervision and Curriculum Development, 1964.

Drumheller, S. J. "Transitional Support System for the 1970's: Developing Individualized Instructional Programs." Educational Technology, 11 (October 1971), 34.

- Dunn, R. S. and Dunn, K. "Practical Questions Teachers Ask About Individualizing Instruction, and Some of the Answers." Audio-visual Instructor, 17 (January 1972), 47-50.
- Eiselen, J. E. "Individualized Instruction." Contemporary Education, 43 (October 1971), 16-20.
- Eisa, A. F. "Individualized Learning." Science and Children, 9 (April 1972), 9-11.
- Emrick, J. A. "Evaluation Model for Mastery Testing." Journal of Educational Methods, 8 (Winter 1971), 321-325.
- Flemmer, Gordon H. "Learning as the Constant and Time as the Variable." Journal of Engineering Education, 61 (March 1971), 523-527.
- Gibbons, Maurice. "Systematic Development in Schooling." The Journal of Education, 16 (April 1970), 32-43.
- Gleason, Gerald T. (Ed.). The Theory and Nature of Independent Learning. Scranton: International Textbook, 1967.
- Grossman, Rosa. "Individualizing Occurs When Thinking Becomes Visible." Education Technology, 12 (March 72), 36-39.
- Henry, Nelson B. (Ed.). The Dynamics of Instructional Groups: Fifty-ninth Yearbook (Part 2) of the National Society for the Study of Education. Chicago: University of Chicago Press, 1960.
- \_\_\_\_\_. (Ed.). Individualizing Instruction. Eighty-first Yearbook (Part I) of the National Society for the Study of Education. Chicago: University Press, 1962.
- Hensley, C. "Individualized Instruction; Purposes and Organization." School and Community, 58 (October 1971), 32-33.
- Howes, Virgil M. Individualizing of Instruction. New York: Macmillan, 1970.
- Jablonsky, Adelaide. "A Selected Eric Bibliography on Individualizing Instruction." New York: Eric Information Retrieval Center on the Disadvantaged, Teachers College, Columbia University, January 1969.
- Jasik, Marilyn. "Breaking Barriers by Individualizing." Childhood Education, October 1968.
- Kepfer, Philip G. "An Instructional Management Strategy for Individualized Learning." Phi Delta Kappan, 49 (January 1968), 260-263.
- Kepfer, P. G., and Kooper, M. B. (Eds.). "Learning Packages; Symposium." Educational Technology, 12 (Summer 1972), 9-85.
- Kingstedt, J. L. "Developing Instructional Modules for Individualized Learning." Education Technology, 11 (October 1971), 73-74.

Kleusmeier, M. J. "Multi-unit Elementary School and Individually Guided Education." Phi Delta Kappan, 53 (November 1971), 161-164.

Kleusmeier, M. J. and Others. "Instructional Programming for the Individual Pupil in the Multiunit Elementary School." Elementary School Journal, 72 (November 1971), 88-101.

Lombak, M., and Lorentzen, M. "Learning Resource Centers in Every Classroom." Instructor, October 1971, 81-89.

National Society for the Study of Education. Individualizing Instruction. Chicago: University of Chicago Press, 1931.

New Approaches to Individualizing Instruction. Princeton: Educational Testing Service, 1955.

Newhouse, Robert A. "Classroom Learning Stations---A Strategy for Personalized Instruction." Research Bulletin, 17 (Winter 1972), 33-39.

Noor, Gertrude. Individualized Instruction: Every Child a Winner. New York: Holt, Rinehart and Winston, 1971.

Peckard, R. G. "Models of Individualized Instruction: The Search for a Measure." Educational Technology, 12 (August 1972), 11-14.

Palmer, C., and Kant, S. "Helping Parents Understand the Flexible Classroom." Indiana School Bulletin, 31 (October 1971), 35-37.

Peter, Lawrence. Progressive Teaching. New York: McGraw-Hill, 1965.

Root, Gus. "Designing Instruction Achievement Motivation." Journal of Engineering Education, 61 (March 1971), 523-527.

Roth, T. C. "Expanding the Concept of Individualized Education." Education Forum, November 1971, 61-66.

Snopp, M. and Others. "Study of Individualizing Instruction by Using Elementary School Children as Tutors." Journal School Psychology, 10 (March 1972), 4-5.

Stodghill, R. "Toward New Goals for Individualization: Symposium." Educational Leadership, January 1972, 293-296.

Tanner, Laurel H., and Lindgren, H. C. Classroom Teaching and Learning. New York: Harper and Row, 1971.

Thomas, G., and Crescimbeni, J. Individualizing Instruction in the Elementary School. New York: Random House, 1967.

Thomas, R. M., and Thomas, Shirley M. Individual Differences in the Classroom. New York: McKay, 1965.

Torrance, Paul E. "Independent Study as an Instructional Tool." Theory into Practice, December 1966.

Veatch, Jannette. "Improving Independent Study." Childhood Education, January 1967.

Wheeler, A. H. "Creating a Climate for Individualizing Instruction." Young Children, 27 (October 1971), 12-16.

Winn, Mildred. "Independent Study at Seven." Childhood Education, 1970.

Wolfson, B. J. "Pupils' and Teachers' Roles in Individualized Instruction." Elementary School Journal, April 1968.

**Subject Areas**

Social Studies

Campbell, R. H. "Individualization Through Inquiry: Social Studies as the Vehicle." Gifted Child Quarterly, Autumn 1971, 225-228.

Kenworthy, Leonard S. Social Studies for the Seventies. New York: Ginn, 1970.

Jarolimek, John and Davis, B. Social Studies: Focus on Active Learning. New York: Macmillan, 1970.

Taba, Hilda; Durkin, M.; and Fraenkel, J. R. Teachers Handbook for Elementary Social Studies, 2<sup>nd</sup> edition, Massachusetts: Addison-Wesley, 1971.

Science

Klopfer, L. E. "Individualized Science: Relevance for the 1970's." Science Education, October 1971, 441-448.

Renner, J. W.; and Ragan, W. B. Teaching Science in the Elementary School. New York: Harper and Row, 1969.

Schmidt, V. E.; and Rockcastle, N. Teaching Science with Everyday Things. New York: McGraw-Hill, 1968.

Victor, Edward. Science for the Elementary School. New York: Macmillan, 1970.

Reading

Chall, Jeanne. Learning to Read: The Great Debate. New York: McGraw-Hill, 1967.

Cohen, S. Alan. Teach Them All to Read. New York: Random House, 1970.

Reading

Harris, Albert J. How to Increase Reading Ability. 5<sup>th</sup> edition. New York: Davis McKay, 1970.

Lee, Doris M. Learning to Read Through Experience. 2<sup>nd</sup> edition. New York: R. Vallon, 1969.

Schoeller, A. W. "Setting Up Reading Stations." Instructor, April 1972, 57-59.

Trimble, Nan. "Reading Tailored To Fit." Reading, 5 (June 1971), 10-14.

Mathematics

Clark, H. C. "Before You Individualize Your Elementary Math." School Science and Mathematics, 71 (November 1971), 676-680.

Davis, R. B. "Individualizing Mathematics Instruction: Symposium." Educational Technology, 12 (March 1972), 5-59.

Trusblood, C. R. "Medal For Using Diagnosis in Individualizing Mathematics Instruction in the Elementary School Classroom." Arithmetic Teacher, November 1971, 505-511.

### III. Open Education

Calbro, H. "Toward a More Flexible Learning Environment." High School Journal, 55 (February 1972); 205-207.

Educational Technology. "Informal (Open) Education, Student Freedom and Educational Technology; symposium." 12 (January 1972), 5-78.

Featherstone, Joseph. Schools Where Children Learn. New York: Liverright, 1971.

Hertzberg, Alvin and Stone, Edward F. Schools are for Children. New York: Schocken Books, 1971.

Mack, D.; Kemp, K.; and Richman, V. C. "Open Education." Grade Teacher, April 1972, 66-70+.

Nyquist, E. B. "Open Education: Its Philosophy, Historical Perspectives, and Implications." Science Teacher, 38 (Summer 1971), 25-28.

Rathbone, C. H. "Open Classroom: Underlying Premises." Urban Review, 5 (Summer 1971), 4-10.

Rogers, V. R. "Open Education." Instructor, August 1971, 74-76+.

Silberman, Charles. Crisis in the Classroom. New York: Random House, 1970.

Walberg, H. J.; and Thomas, S. C. "Open Education: An Operational Definition and Validation in Great Britain and United States." American Education Research Journal, 9 (Spring 1972), 197-208.

Weber, Lillian. The English Infant School and Informal Education. Englewood Cliffs, New Jersey: Prentice-Hall, 1971.

Windley, V. O. "New Look at Teacher Education." Urban Review, 5 (March 1972), 3-11.

## II. Multi-media Instruction

American Library Association, American Association of School Libraries, and National Education Association, Department of Audiovisual Instruction. Standards for School Media Programs. Chicago: American Library Association, 1969.

Boocock, Suzanne, and Schild, E.D. Simulation Games in Learning. Beverly Hills, California: Sage, 1968.

Briggs, Leslie J.; Gagne, Robert M.; Gagne, Robert M.; and May, Mark A. Instructional Media: A Procedure for the Design of Multi-Media Instruction. A Critical Review of Research and Suggestions for Future Research. Pittsburgh, Pennsylvania: American Institutes for Research, 1967.

Brown, James W.; Lewis, Richard S.; and Hartleroad, Fred F. A-V Instruction: Materials and Methods. New York: McGraw-Hill, 1969.

Brown, James W., and Nordberg, Kenneth D. Administering Educational Media. New York: McGraw-Hill, 1965.

Burkhalter, Barton. Case Studies in Systems Analysis in A University Library. Matuchen, New Jersey: Scarecrow Press, 1968.

Dale, Edgar. Audiovisual Methods in Teaching. New York: The Dryden Press, 1968

DeSecco, John P. (Ed.). Educational Technology: Readings in Programmed Instruction. New York: Holt, Rinehart & Winston, 1964.

Erickson, Carlton. Administering Instructional Media Programs. New York: Macmillan Company, 1966.

Erickson, Carlton. Fundamentals of Teaching with Audiovisual Technology. New York: Macmillan Company, 1965.

Gagne, Robert M. Psychological Principles in System Development. New York: Holt, Rinehart and Winston, 1963.

Godfrey, Eleanor P. The State of Audiovisual Technology 1961-1966. Washington, Department of Audiovisual Instruction, National Education Association, 1966.

Jackson, Philip. The Teacher and the Machine. Pittsburgh: University of Pittsburgh Press, 1966.

Joyce, Bruce. The Teacher and His Staff: Man, Media and Machines. Washington, D.C.: National Education Association, Center for the Study of Instruction, 1967.

Kemp, Jerald E. Planning and Producing Audiovisual Methods. San Francisco: Chandler Publishing Company, 1963.

Lange, Phil (Ed.). Programmed Instruction. (part 2) Sixty-sixth Yearbook of the National Society for the Study of Education. Chicago: University of Chicago Press, 1957.

Loughery, John W. Man-Machine Systems in Education. New York: Harper and Row, 1967.

Lumsdaine, A., and Glosor, R. Teaching Machines and Programmed Learning. Washington, D.C.: National Education Association, 1960.

Pula, Fred J. Application and Operation of Audiovisual Equipment in Education. New York: John Wiley and Sons, 1968.

Rossi, Peter H., and Biddle, Bruce. The New Media and Education. Chicago: Anchor Press, 1966.

Skinner, B. F. The Technology of Teaching. New York: Appleton-Century-Crofts, 1968.

Thomas, E., and Feldman, R. Concepts of Role Theory: An Introduction through Programmed Instruction and Programmed Case Analysis. Ann Arbor: Campus Publishers, 1964.

Weisgerber, Robert (Ed.). Instructional Process and Media Innovation. Chicago: Rand McNally and Company, 1956.

Witt, Paul W.F. (Ed.). Technology and the Curriculum. New York: Teachers College Press, 1968.

Wittich, Walter A., and Schuller, Charles F. Audio-Visual Materials: Their Nature and Use. New York: Harper and Brothers, 1957.



V. Public Document

West Las Vegas Schools. Application for Continuation Grant ESEA Title III.,  
Armi Jo Bi-lingual - Bi-cultural Demonstration Center, New Mexico:  
Department of Education, 1971.