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INTERIM PROGRESS REPORT OF A REMOTE TEACHER TRAINING
INSTITUTE FOR EARLY CHILDHOOD EDUCATORS (FUNDED BY NDEA TITLE
X2).

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DESCRIPTORS- *INSERVICE TEACHER EDUCATION, *INSTITUTES
(TRAINING PROGRAMS), *MICROTEACHING, VIDEO TAPE RECORDINGS,
*TEACHING MODELS, DISADVANTAGED ENVIRONMENT, TEACHER
BEHAVIOR, DISADVANTAGED YOUTH, AUDIOINSTRUCTIONAL PROGRAMS,
*PRESCHOOL TEACHERS, THE NEW NURSERY SCHOOL, GREELEY,
COLORADO, NDEA INSTITUTE,

IN AN EFFORT TO TRAIN TEACHERS TOO GEORGRAPHICALLY
SEPARATED TO MEET REGULARLY FOR COURSE WORK, AN INSTITUTE WAS
PLANNED AT COLORADO STATE COLLEGE IN GREELEY, COLORADO, ONE
HUNDRED TEACHERS ATTENDED 2- TO 5-DAY ORIENTATION SESSIONS
CONCERNING THE USE OF MICROTEACHING TECHNIQUES AND
SPECIFICALLY DEVELOPED MATERIALS IN WORKING WITH
DISADVANTAGED NURSERY SCHOOL CHILDREN. UPON RETURNING TO
THEIR OWN PRESCHOOLS, THE TEACHERS WERE INSTRUCTED TO VIEW A
FILMED DEMONSTRATION TEACHING EXAMPLE, TO TEACH 4 PREWRITTEN
LEARNING EPISODES TO SEVERAL OF THEIR CHILDREN, AND TO
VIDEOTAPE 1 OF THE LESSONS IN A NEARBY RECORDING CENTER. THE
TEACHER WAS THEN TO COMPARE THE RESULTS WITH THE FILMED
SAMPLE, FILL OUT EVALUATION FORMS AND MAIL THESE WITH THE
TAPE TO THE INSTITUTE FOR CHILD STUDY IN GREELEY WHERE THE
LESSON WOULD BE CRITICIZED AND LATER RETURNED TO THE TEACHER.
PROJECT DATA WILL BE ANALYZED AND FINDINGS REPORTED BY JULY
1968. IF THIS TYPE OF REMOTE TEACHER TRAINING PROVES TO BE
SUCCESSFUL, IT COULD PROFITABLY BE USED FOR TEACHER
SELF-EVALUATION OR TRAINING IN AREAS REMOTE FROM EDUCATIONAL
INSTITUTIONS. THIS PAPER WAS PRESENTED AT THE AMERICAN
EDUCATIONAL RESEARCH ASSOCIATION (CHICAGO, FEBRUARY, 1968).
(MS)

U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
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INTERIM PROGRESS REPORT OF A
REMOTE TEACHER TRAINING
INSTITUTE FOR
EARLY CHILDHOOD EDUCATORS
(FUNDED BY NDEA TITLE XI)

BY

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For presentation at the American Educational Research Association
Annual Convention, Chicago, Illinois, February, 1968. Symposium
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and Development.

The writers wish to acknowledge several contributions to this paper
from Glen Nimnicht and Oralie McAfee.

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INTRODUCTION

Colorado State College has long been renowned for excellence in teacher training; its nursery and K-12 laboratory schools have conducted exemplary programs for many years now, enabling teacher trainees to observe and participate in all levels of ongoing classroom activities primarily designed for middleclass children with various talents or handicaps. THE NEW NURSERY SCHOOL began operation in the fall of 1964 under the auspices of Colorado State College and with the help of numerous contributions of funds and labor, to conduct research on the efficacy of an *autotelic responsive environment* nursery program for environmentally deprived children. Due to this radical departure from traditional early childhood programs (see references for additional information) the teacher's behavior had to be radically modified. Moreover, in order for this novel approach to be adequately developed and implemented for widespread validation studies, it became evident that a new teacher training model was exigent. In 1965, the principal investigator, stimulated by Dwight Allen's pioneering efforts in the area of microteaching, began experimenting with some logical extensions of this technique. The support of the Ford Foundation's Experimental Program in Teacher Education, the Rocky Mountain Educational Laboratory's Project to Improve Pre-Service Teacher Education and the Jefferson County Public School's Extended Summer Program for inservice teacher improvement (all conducted with the cooperation of Colorado State College) are gratefully acknowledged. A unique training program, which is designed to effect optimum economy and efficiency in training, is the outcome of these experiments and is the subject of the current

experimental teacher training program. The advent of relatively inexpensive, easily operated, reliable and portable videotape recorders is an important concomitant technological breakthrough.

UNIQUE TRAINING PROGRAM

This project is designed to test an innovative teacher training technique and therefore employs existing resources for subject matter. For most participants, the training program was introduced during intensive two day on-site orientation sessions (although some attended a one-week session in Greeley, Colorado.) These sessions involved specific content and processes suitable for meeting the specific needs of environmentally deprived children; this massed input is presently being followed by distributive practice with several in-service training units for the participants.

There are several objectives for this initial project:

1. To test on a limited basis a unique inservice teacher training model for possible wide-spread implementation in such programs as Follow Through, Head Start, and E.S.E.A. Titles I and III inservice programs.
2. To train approximately one hundred teachers to better accomplish four major objectives (see below) in early childhood education
3. To further develop, implement, evaluate, and refine the curricula which have been prepared for this project
4. To compare the relative efficacy of this approach with other more traditional training programs

PARTICIPANTS

This training program serves over one hundred teachers of young children during the 1967-68 academic year. In order to realize maximum efficiency of the training model the trainees are fairly well clustered within a geographical area which allows ready access to the recording equipment; each trainee has at least one-half day of recording time every two weeks. There are six centers

with at least fifteen, but no more than seventeen participants; a seventh center involves nine persons. A variety of instructional personnel, federal programs, geographical regions and racial groups are represented. These data are summarized in Table I.

Note that most trainees are in Follow Through and Head Start programs. Also, participants represent both experienced and inexperienced teachers as well as paraprofessionals (aides) who were recommended by their local program directors and who indicated an interest in and capability for participating in the experiment.

PREPARATION

Preparation during July and August of 1967 included the development and distribution of propaganda, screening of applicants, and arrangements for participants' course work, housing, and meals. Also prepared during this time were the first two units which included written guides, film clips, feedback and critique instruments.

Two one-week summer orientation sessions were planned for the Institute's participants (about half of the participants were to have attended each of the sessions) at Colorado State College in Greeley, Colorado. Each trainee attending received thirty hours (five six-hour days) of concentrated instruction concerning:

1. the rationale for the responsive environment approach;
2. the general classroom procedures used in an autotelic responsive environment;
3. the effects of environmental deprivation on child growth and development;
4. the learning experiences young children need to overcome environmental deprivation;
5. the operation of the videotape recorder; and
6. critiquing and related response instruments to provide two-way feedback information.

The first of the sixteen instructional units was used as an

TABLE I
DISTRIBUTION OF NDEA INSTITUTE TRAINEES

CENTER	TOTAL	TEACHERS	AIDES	FEDERAL PROGRAM	NO.	STATE	LEARNER
							RACIAL GR(UPS)*
Boulder Valley Schools	17	14	3	Follow Through Head Start ESEA: Title I	5 3 9	Colorado	Spanish-Surname Anglo
Chattanooga Public Schools	15	15	0	Follow Through Head Start	9 6	Tennessee	Negro Anglo
Sumter Pre-Primary Schools	17	7	10	ESEA: Title III	17	South Carolina	Negro Anglo Anglo
Salt Lake City Schools	15	15	0	Follow Through ESEA: Title I	6 9	Utah	Indian (Ute) Spanish-Surname Negro
Oglala Sioux Reservation	15	9	6	Head Start	15	South Dakota	Indian (Sioux)
Crow Reservation	15	10	5	Head Start	15	Montana	Indian (Crow)
Fort Berthold Reservation	9**	3	2	Head Start	9**	North Dakota	(Mandan, Indian Hidatsa, Aricara)

*Listed in order of decreasing numbers.

** An additional five persons are receiving written and filmed materials and critiquing services, but are not enrolled for credit at Colorado State College. This in-service program has been mutually planned and funded by the NDEA (Title XI) Institute, Fort Berthold CAP, and the Indian CAP (University of South Dakota).

example during the Greeley in-house training session in August. The remaining participants, however, experienced the highlights of this orientation in two-day on-site sessions besides conferring with their colleagues who did attend the in-house session.

Production delays postponed the distribution of the second instructional unit until October. Other units are being sent out at approximately two-week intervals upon our receipt of final response instruments completed for the previous unit. The sixteen units contain a total of sixty-four learning episodes which are designed around the basic objectives of the New Nursery School:

1. to develop a positive self-image;
2. to increase sensory and perceptual acuity;
3. to improve language skills; and
4. to improve problem-solving and concept formation abilities.

UNIT CONTENTS

Each training unit includes:

1. four carefully prepared learning episodes to be used in the classroom;
2. a written explanation of the purpose of the four episodes, how they are to be presented, and how they relate to other learning episodes;
3. a three-to-seven minute film clip of a model teacher or aide demonstrating one of the learning episodes;
4. a videotape;
5. instructions for the use of the training unit including suggested viewing procedures to enable the trainee to focus on significant aspects of each episode; and
6. critique and response sheets for the trainees to provide feedback information to the producers of the learning episodes (sample attached).

The instructions tell the trainee to:

1. read the written material that explains the purpose of the four learning episodes;
2. view the filmed example demonstrating the use of one of the episodes;
3. try each of the episodes with several children and videotape one of the lessons;
4. view the results and compare them with the filmed and/or written sample; and
5. fill out the sheets and mail them along with their recorded videotape to the research center.

A staff member at the NDEA Institute in Greeley views the videotape and prepares a critique using the same format as the trainee. These responses are returned to the trainee along with the tape so that the submitted attempt can be reviewed and the critique is then read simultaneously. That same tape is then used for recording subsequent lessons.

Colorado State College offers each student five quarter hours of credit for the successful completion of the orientation program plus satisfactory completion of the fifteen remaining instructional units and the creation of one suitable self-styled unit. The distribution of the five credits - two earned during fall quarter; one, winter; and two spring - represents a step toward variable registration, a breakthrough in college registration necessary to facilitate the individualization of instruction for college students.

CURRENT PROGRAM STATUS

It may be correctly inferred from Table I that there is a wide diversity in the trainees in terms of their cultural background, geographic locale, professional and paraprofessional training and/or experience, and general attitudes toward themselves and school-related learning. The seven centers also serve an equally wide diversity of learners. In reviewing the progress of this training program, a number of noteworthy events and highlights emerge. This section cites a few of these items in order to give the reader a more concrete grasp of the daily operation of the program.

Numerous inquiries are received about the hardware. Can a

group comprised largely of women with very little mechanical knowledge or interest successfully manage such elaborate equipment? It seems significant that excellent recordings are coming in from isolated clusters of Indians who are scattered from one end of their reservation to the other, a distance of about 150 miles. Arrangements for a telelecture to some centers requires the initial installation of telephone service, which was scarcely available in some communities which have only one central phone.

With some notable exceptions, the hardware aspect has not been a serious stumbling block. The flustered, elderly teacher who accidentally plugged the camera power cord into the battery input of the monitor, only to watch the monitor flash and go up in smoke, found her first experience rather exasperating. An occasional broken tape and one incidence of a gob of tape that was literally consumed by the rotating recording heads, to the utter destruction of both, serve as exceptions to the rule. In some centers the trainees transport, set up, and operate the equipment themselves; in other centers, a special person is assigned to manage the equipment and to resolve related logistics problems as they arise.

Although only two trainees have dropped out -- one due to illness, the other due to a change in training assignment -- several are running behind schedule. When training is somewhat self-pacing and credits are contingent upon accomplishment of program objectives, numerous individual differences arise. In spite of obvious enthusiasm for the training project, some simply have trouble getting started, others are absolute perfectionists, and others simply aren't prepared when the equipment is ready for their use. Sometimes the equipment is overly protected and not

made available to the trainees when they are ready for it; some centers have purchased additional equipment on their own to alleviate this problem. Of course some of the delays are attributable to the inaccessibility of some trainees because of snow conditions, postal difficulties (especially during the year-end holiday season), and lack of telephone service. In some instances, trainees are moving faster than anticipated and they do not get materials for subsequent units as rapidly as they could use them.

Because of awkward and inadequate time elements, the entire program got started and is running about two months behind the original schedule. However, certain adjustments in mailing sequences and critiquing and feedback efficiency, as well as the resolution of numerous initial logistics problems encountered on-site, promise to enable the majority of trainees to complete the program by June, 1968.

PROGRAM EVALUATION

During June, 1968, an analysis of the data will attempt to assess the results of the Institute. These findings and all other salient information will be reported by July, 1968.

The effectiveness of the training program will be assessed by determining the teachers' attitudes and opinions about the method of training, and by observing changes in teachers' cognitive and affective behavior through analysis of the videotapes. It will also be possible to compare the classroom performance of the Head Start contingent in this experimental group of teachers with the performance of a similar control group which receives the more traditional eight weeks of Head Start training. Although the

control groups receive the written descriptions of the learning episodes, they do not see film clips of model teaching nor do they experience the microtraining process.

PROJECTION

If the approach proves to be a viable one, the subject matter content is limited only by the experimenter's imagination. Thus, a large repertoire of teaching/learning strategies for a wide variety of children could be modeled and eventually mastered by the teacher trainees. The subject matter in the sixteen units used for this first venture into the remote training and supervision of teachers is sufficiently unique and identifiable that evaluation of the technique's effectiveness is facilitated. Ultimately, it would be quite desirable to develop a library of model film-clips and/or videotapes which would demonstrate how outstanding teachers in different programs throughout the country manage various classroom learning situations and their corollary critical incidents.

CURRENT SPIN-OFFS

A similar program of in-service teacher training for Head Start teachers in five California counties is being conducted simultaneously under the supervision of Glen Nimnicht and other staff members of the Far West Laboratory for Educational Research and Development in Berkeley, California. This program, funded by the Office of Economic Opportunity, is using the same learning episodes and to testing the exportability of the training process for other institutions. The Rocky Mountain Educational Laboratory, headquartered in Greeley, Colorado, is exploring a similar process to

help train second grade teachers to prevent or identify and remediate individual learning disabilities spotted in their students. This program has a reasearch design to test several applications of video-tape training. Further information on either "spin-off" is available from the chief investigators.

STAFF

1. **DIRECTOR, John Meier, Ph.D.,** Director of the Institute for Child Study, Associate Professor of Psychology and Associate Director of the New Nursery School. Meier acts as liason officer between Colorado State College and the United Stated Office of Education. He wrote the precis and proposal, and negotiated the grant award document. Presently on leave to the Rocky Mouncain Educational Laboratory, Meier continues as unpaid director and assisting consultant with Institute staff to assure the completion of contracted tasks including the preparation of required reports and design and conduct of follow-up or continuation studies that may develop.
2. **ASSOCIATE DIRECTOR, Gerald Brudenell, M.A.,** Associate Director of the Institute for Child Study and Temporary Instructor of Education at Colorado State College. Brudenell coordinates the various aspects of the Institute. He conducted six on-site applicant screening, public relations, and general supervision of trainees. He maintains continuity of contact with trainees through occasional on-site follow-up visits and involvement in critiquing procedures.
3. **CHIEF CONSULTANT, Glen Nimnicht, Ed.D.,** Director of the New Nursery School, Adjunct Professor of Education at Colorado State College and Program Director of In-service Training at the Far West Laboratory for Educational Research and Development. Nimnicht and the staff at the Far West Laboratory are aiding in the development of in-service units, the critical review of units to insure quality control and the evaluation of the effectiveness of the program.
4. **SUPERVISING TEACHER, Oralie McAfee, M.A.,** Head Teacher at the New Nursery School and Instructor of Education at Colorado State College. Mrs. McAfee taught privileged preschool children for several years and environmentally deprived preschool children for the last three and one half years. She models many of the learning episodes and writes and directs the filming of them all. She also delineates the terminal behaviors for each unit which are an integral part of each learning episode's critique.

5. **PART-TIME INSTRUCTORS** The following people conducted lecture/seminar sessions during the one-week Greeley orientation session and prepared videotapes for use during the on-site orientation sessions for those trainees who did not attend the in-house session.
 - a. *Richard Perchlick*, Ed.D., Associate Professor of Political Science, has completed several published studies on the sociology of poverty.
 - b. *Barbara Mickey*, Ph.D., Associate Professor of Anthropology, has done extensive research with deprived minority groups on the cultural aspects of deprivation.
 - c. *John Meier*, Ph.D., Associate Professor of Psychology, is concerned with child growth and development in deprived environments. Meier also conducts periodic telelectures with the trainees in their respective locations.
 - d. *Oralie McAfee*, M.A., Instructor of Education, presented classroom procedures which have been validated as being particularly effective with disadvantaged children.
6. Critiquers of the videotape-recorded learning episodes are experienced teachers who have received additional training from program staff and are supervised for reliability and validity in adhering to the specific lesson analysis procedures and criteria developed for each unit.
7. On-site camera operators and recording coordinators have been job corps workers, teachers, and administrators whose task has been transporting and operating the videotape equipment as well as scheduling its use.
8. *Delores Sawatzky*, secretary, accomplishes numerous office duties including correspondence with individual participants and the organizing and mailing of the instructional packages.
9. Other persons were used to model many of the filmed learning episodes in order to vary the teacher identification throughout the units.

THE 5RS OF MICROLEARNING

1. RECORD

The teacher videotapes himself teaching a three to seven minute learning episode.

2. REVIEW

The teacher plays the videotape, observing the lesson's strengths and needs.

3. RESPOND

The teacher acknowledges the lesson's strengths and needs.

4. REFINE

The teacher incorporates only one or two recommended changes in a restructuring of the learning episode, assuring greater success in the attempt at improved teaching.

5. RETEACH

The teacher videotapes himself teaching the refined learning episode.

Additional information available from:

NDEA INSTITUTE
1203 4TH STREET
GREELEY, COLORADO 80631

303-353-2943

SIMULAC¹

NAME _____ CENTER _____ UNIT _____

Check episode which was taped: A B C D Variation
If a variation, describe it briefly:Check length of episode: less than 3 minutes; 3-5 minutes; 5-7 minutes;
 more than 7 minutes

First Review of Videotape: While observing videotape, check all descriptions noted on pages 1 and 2

EPISODE CHARACTERISTICS

MATERIALS AND EQUIPMENT

SOURCE: Learner Made Facilitator made Commercially madeMANIPULATOR: Learner Facilitator
If both learners and facilitators manipulate materials, write the appropriate fraction for each (e.g. Facilitator, 1/4, Learner 3/4)ITEMS: Chalkboard
 Charts and pictures
 Slides, films, transparencies
 Audio aids
 Textbooks, workbooks
 Individual story books
 Real objects (e.g., live animals, artifacts, _____)
 Special teaching aids (list: _____)
 No materials or equipment

MANAGEMENT (Structure and Organization)

NUMBER: Five or more learners in group with teacher
 Five or more in group with aide
 Five or more in group without teacher or aide
 Four or fewer with teacher
 Four or fewer with aide
 Four or fewer without teacher or aideARRANGEMENT: Individual learner with teacher or aide
 Individual learners independently involved in separate task
 Individual learners independently involved in same task
 Learns working together with same task

STRATEGIES

 Activities or tasks immediately inform learner of consequences
 Activities or tasks proceed at rate determined by learner
 Learner remains with task after facilitator leaves or allows learner to take over

LEARNER (Child) and FACILITATOR (Teacher) BEHAVIORS

I. LEARNER BEHAVIORS

L. F. II. FACILITATOR BEHAVIORS

A. Process

Initiates conversation, talks	1	Is silent - awaits learner talk
Talks with facilitator	2	Responds to learner
Listens to facilitator	3	Encourages learner
	4	Discourages learner
	5	Ignores learner talk
	6	Initiates conversation, talks
Explores, experiments	7	
Discovers, solves problem	8	Reduces tension (solves, soothes)
	9	Evaluates episode achievement
Initiates activity	10	
Finishes task	11	
Leaves task unfinished	12	
Enters scene	13	Enters scene
Leaves scene	14	Leaves scene
Smiles, oohs, ahs	15	Smiles, oohs, ahs (manifest pleasure)
Bites lip, clenches fist	16	Bites lip, clenches fist (manifest tension)
Yawns, appears tired	17	Yawns, appears tired
Withdraws, cowers	18	Withdraws, cowers
Swat, spank, pinch	19	Swat, spank, pinch
Voice is soft, seductive	20	Voice is soft, seductive
Voice is stern, loud	21	Voice is stern, loud
Does what <u>he</u> wants (inner directedness)	22	
Does what <u>others</u> want (other directedness)	23	

B. Content

Plays game	1	Introduces game
Sings	2	Leads, accompanies singing
Plays music	3	Plays musical instrument
Eats refreshments	4	Prepares, serves refreshments
Looks at book	5a	Offers book
Reads book	5b	
Has book read to him	6	Reads to learner
Has story told to him	7	Tells story (ies) to learner
Touches objects	8a	Presents objects
Manipulates objects	8b	
Listens to records, tapes, Language Master, jukebox	9	Plays records, tapes, Language Master
Uses chalkboard	10	Illustrates at chalkboard
Dances	11a	Allows free activity
Runs about	11b	
Rests	11c	
Paints	12a	Introduces art media
Cuts	12b	
Draws	12c	
Writes	12d	
Talks on telephone	13	Talks on telephone
Gives skit or play	14	

EPISODE CONTENT DESCRIPTIONS

A. Rank the following overall episode objectives using "1" to indicate the objective which is most evident in the lesson and "4" for the objective least evident.

- Improve self-image
- Increase sensory and perceptual acuity
- Increase language skills
- Increase problem solving and concept formation abilities

B. The specific learning episode objective is as follows: _____

SECOND REVIEW OF VIDEOTAPE

C. Observe learner and facilitator behaviors. In the right column record (by tally mark) each comment and action indicating whether the behavior applies to verbal or nonverbal behavior. Behaviors noted with triple asterisk (***) are being taught in this unit.

CONTENT DESCRIPTION	LEARNER		FACILITATOR	
	Verbal	Nonverbal	Verbal	Nonverbal
***1. The child can count to ten with an adult pointing to each object counted.		X	X	X
2. The child can count beyond ten with an adult pointing to each object counted.		X	X	X
3. The child can point to each object as he counts to ten without help.		X	X	X
4. The child points to each object as he counts beyond ten without help.		X	X	X
5. A numeral is named.				
6. Cut out numerals are correctly placed on numeral outlines on a board.	X		X	
7. A correct response is given to the questions, "What numeral is this?"				X
8. The numerals are placed in counting order.	X		X	
***9. A numberite puzzle is completed.	X		X	
***10. The number of objects needed for a given group of persons is solved.				

AFTER VIEWING: List two suggestions for improving this lesson (as taped).

January, 1968

SELECTED REFERENCES

- Cracraft, Jane. "Greeley's New Nursery School," *Contemporary, The Sunday Denver Post*, (March 12, 1967), pp. 18+. (Reprinted in *Head Start Newsletter*, Vol. 2, No. 6, June, 1967. Washington, D.C.: Office of Economic Opportunity.)
- Deutsch, Martin, Nimnicht, Glendon, et.al. *Memorandum on Facilities for Early Childhood Education*, Prepared for Educational Facilities Laboratories, 477 Madison Avenue, New York, New York.
- McAfee, Oralie. "The Right Words," *Young Children*, Vol. XXIII, No. 2, November, 1967, pp. 74-78.
- Meier, John. "Innovations in Assessing the Disadvantaged Child's Potential," in *Disadvantaged Child*, Vol. 1, edited by Jerome Hellmuth, Seattle: Special Child Publications, 1967, pp. 173 - 199.
- Meier, John. "Rationale for and Application of Microtraining to Improve Teaching," Paper Presented at 1967 A.E.R.A. Convention: to appear in *Journal of Teacher Education*, 1968 (in press) numerous related references.
- Meier, John and Nimnicht, Glendon. "A First Year Partial Progress Report of a Project in an Autotelic Responsive Environment Nursery School for Environmentally Deprived Spanish-American Children," *Journal of Research Services*, Vol. V, Greeley, Colorado: Bureau of Research Services, Colorado State College (February, 1966), pp. 3-34.
- Meier, John, Nimnicht, Glendon, and McAfee, Oralie. "Nursery School Education Today," *Journal of Research Services*, Vol. VI, Greeley, Colorado: Bureau of Research Services, Colorado State College, (May, 1967), pp. 33-39.
- Meier, John, Nimnicht, Glendon, and McAfee, Oralie. "An Autotelic Responsive Environment Nursery School for Deprived Children," *Disadvantaged Child*, Vol. II, edited by Jerome Hellmuth, Seattle: Special Child Publications, 1968 (in press).
- Newsweek*, (January 29, 1968) p.48.
- Nimnicht, Glendon. "Low-cost Typewriter Approach Helps Preschoolers Type Words and Stories," *Nations Schools*, Vol. 80, No. 6, December, 1967, pp. 34-37.
- Nimnicht, Glendon, McAfee, Oralie, and Barnes, Barry. "Developing a Positive Self-Image," Part VII in a series on Teaching the Spanish-American Child, *Education Colorado*, Vol. 2, No. 13. (March 14, 1967), p. 3.

Nimnicht, Glendon, Meier, John, and McAfee, Oralie. "A Summary of the Evaluation of the Experimental Program for Deprived Children at the New Nursery School Using Some Experimental Measures," Greeley, Colorado: Colorado State College (mimeographed report, December, 1967).

Pines, Maya. *Revolution in Teaching*, New York: Harper and Row, 1967.

Pines, Maya. "Slum Children Must Make Up For Lost Time," *New York Times Magazine*, October 15, 1967, pp. 66+.

Pines, Maya. "Early Childhood Learning," *N.E.A. Journal*, (February, 1968).

"Unlocking Early Learning Secrets," *LIFE*, Vol. 62, No. 12, March 31, 1967, pp. 40+.