DOCUMENT RESUME

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TITLE	The Flexible Training System: A Training System for Staff of Early Childhood Education Programs.
INSTITUTION	Far West Lab. for Educational Research and Development, San Francisco, Calif.
SPONS AGENCY	National Center for Educational Research and Development (DHEW/OE), Washington, D.C. Div. of Educational Labs.; National Inst. of Education (DHEW), Washington, D.C.
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DESCRIPTORS	Class Management; *Early Childhood Education; Educational Programs; Evaluation Techniques; *Inservice Teacher Education; Leadership Training; Learning Laboratories; Management Systems; Occupational Mobility; *Program Descriptions; *Project Training Methods; Systems Analysis; *Teacher Education Curriculum; Teacher Evaluation; Teaching Techniques; Training Techniques

ABSTRACT

This booklet contains the 1972 and 1973 program and management plans for the Flexible Training System for Teacher Assistants. The program has four primary objectives, each one related to a major problem in early childhood education. Objectives are (1) to develop an educational program that provides a career ladder for low income persons who are currently involved or may become involved in some educational programs for children from ages 3 to 9, (2) to provide an efficient way of training large numbers of persons who will be needed in Head Start and Day Care programs, (3) to upgrade the quality of existing preschool programs by providing inservice training, and (4) to develop a flexible training system that will allow a teacher in kindergarten through the third grade to choose from among a set of competencies those that will increase her effectiveness in working with a particular group of children. (ST)

The Flexible Training System

A TRAINING SYSTEM FOR STAFF OF EARLY CHILDHOOD EDUCATION PROGRAMS

A Program of Division III

Far West Laboratory for Educational Research and Development

- Basic Program Plan (March, 1972)
- Response to a Request for Information (Oct., 1972)
- Resource Allocation & Management Plan (Feb., 1973)

Introduction

This booklet contains the 1972 and 1973 program and management plans for the Flexible Training System ("A Training System for Staff of Early Childhood Education Programs") being developed by Division III of the Far West Laboratory for Educational Research and Development. The plans have been reprinted together here in order to provide a description of the basic concept of the Flexible Training System and the revisions in plans made during 1972-73, the first year of development.

The Basic Program Plan of March, 1972 outlines the basic concept of the Flexible Training System. This plan was submitted to the National Center for Educational Research and Development, Office of Education, U.S. Department of Health, Education and Welfare. The appendices and vitae contained in the plan have not been included here.

A supplement to the Basic Program Plan is provided in the Response to a Request for Information and Questions Raised by the Review Panel on the Basic Program Plan. This supplement was submitted in October, 1972 to the newly established National Institute of Education, HEW.

The Resource Allocation and Management Plan, submitted to the National Institute of Education in February, 1973, describes some revisions that have been made in the plans for development, and outlines development milestones for the next three years. (Budget projections have not been reprinted here.) Because this plan is the most recent description of the Flexible Training System, it has been placed first in this booklet.

Contents of Booklet

RESOURCE ALLOCATION AND MANAGEMENT PLAN

A Training System for Staff of Early Childhood Education Programs

(FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS)

A Program of Division III

February 1973

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

1855 Folsom Street, San Francisco, California 94103

FAR WEST LABORATORY FOR EDUCATIONAL
RESEARCH AND DEVELOPMENT
1855 FOLSOM ST., SAN FRANCISCO, CALIFORNIA 94103

February 21, 1973

Dr. Martin Engel
Task Force on Applied Studies
National Institute of Education
Code 600
Washington, D. C. 20202

Dear Dr. Engel:

In response to your January 12, 1973, letter transmitting Mr. Glennan's letter of the same date to Laboratory and Center Directors and a copy of the guidelines for developing our Resource Allocation and Management Plan, I am transmitting ten copies of our plan for the:

Training System for Staff of Early Childhood Education Program
[Flexible Training System for Teaching Assistants]

Maximum Contract Period:	3 Years
Maximum 3-Year Contract Amount:	$1,008,000
Maximum FY'73 Amount Requested:	$ 296,000

It is our hope that the enclosed document meets all the criteria embodied in the guidelines. Should, in your judgment, the need for either amplification or clarification exist with regard to our submission, please contact me or Dr. Glen P. Nimnicht.

On behalf of myself and the Laboratory Staff I want to thank you for your consideration of our submission and the time you dedicated to site visitation and assistance.

Sincerely,

John K. Hemphill

John K. Hemphill
Laboratory Director

JKH/br
Enclosure

TELEPHONE (415) 565-3000

FAR WEST LABORATORY FOR EDUCATIONAL
RESEARCH AND DEVELOPMENT
1855 FOLSOM ST., SAN FRANCISCO, CALIFORNIA 94103

FLEXIBLE TRAINING SYSTEM FOR TEACHING ASSISTANTS

SUPPLEMENTAL PROGRAM INFORMATION

The Basic Program Plan, plus the response to Marc Tucker's letter of November 22, 1972, still constitutes the basic description of the program with the exceptions that will be noted below.

The plan for dissemination has been deleted from the scope of work with the anticipation that a separate proposal for dissemination will be developed at a later date. There is some dissemination inherent in the development process because we will be working with a few universities and colleges in the process of developing and testing the system. Working with colleges and universities will probably constitute a major portion of the actual dissemination effort, but at the present time the focus is on development, and dissemination is a by-product with no allocation of time or resources to that effort.

The description of the components in the Basic Program Plans has been modified and redefined; the plan is now organized in terms of Work Units instead of components. The first component--Identification of Competency Units and System Development--has been eliminated. The preliminary identification of competencies has been completed and modification will be made as a part of the decision-making process which occurs as milestones. The System Development will occur as a part of the Management System. The second component--Identification of Resources--has been eliminated and has become an activity in each Work Unit. The third component--Developing Competency Units--is broken down into four Work

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Units, and the fourth component--Measuring the Effectiveness of Clusters--has been replaced by the second Work Unit--Developing the Assessment System--and becomes a part of the formative evaluation of each Work Unit. The fifth component--Working with Colleges and Universities--has become the first Work Unit.

Since the Program Plans were based upon a time frame that extended beyond three years, the scope of the work had to be altered to produce a viable product in three years. This has been accomplished by limiting the scope of work to the development of a competency-based program for teacher assistants or day care workers dealing with three-, four-, and five-year-old children. As the description of the program indicates, some of these same competency units will apply to other staff members in a pre-kindergarten program and to teacher assistants working with older children, but this application will be considered a by-product and the focus of the development will be to develop units to train assistant teachers.

To accomplish this, we must develop the units for the individual who will train the teachers--in our terminology, the Program Advisor; thus, the units will be designed to enable the Program Advisors to train assistants in the classrooms or centers. To illustrate this we have duplicated the scheme from page 35 of the Basic Program Plan and outlined with dark lines the units that will be developed. Obviously, if we are to complete the training program for the entire staff an addendum will have to be submitted. We intend to submit an addendum requesting an extension but to do so at this time would be premature because we do not have the experience we need to project so far into the future. We anticipate that the request for extension will be ready in 18 months.

Another major departure from the Basic Program Plans is described in the second Work Unit: the development of an Assessment System and the competency

units that are required to train someone to use the system. This system is intended for use by college professors and Program Advisors who will be working with us. It is not for the use of teacher assistants. The need to develop this assessment system became obvious as we refined our thinking on the problems of evaluating the Flexible Training System and devising a way to determine the general competency of a person before the training began so that we could know where to start the training and have some basis for determining its effects beyond the assessment of each unit. Thus, this assessment system will serve two purposes: 1) It will contribute to the evaluation of clusters of competencies and of the total system, and 2) it will be a part of the system itself.

The development of competency units as detailed on Table 4, pages 65 to 68, remains basically intact but the time for development has changed because of the priority on developing the assessment system first and arranging development so that we could make the best use of staff time. The units to be developed are:

1. Understanding the Total Program
2. Encouraging self-expression through language
3. Developing Children's Language Skills
4&5. Developing Children's Concept-Formation Ability.
6. Developing Child's Social Concepts.
7. Developing Children's Problem-Solving Ability
8. Using Toys and Games
9. Assessing Children's Needs and Progress
10. Using Children's Spontaneous Play for Learning
11. Understanding Child's Language
12. Understanding Child's Background
13. Helping Children Develop a Healthy Self-Concept
14. Managing Children's Behavior in a Group
15. Helping Children Develop Self-Control
16. Working Effectively with Other Adults
17. Working with Parents
20. Developing Children's Senses and Perceptions.
24. Analyzing Materials for Blacks and Chicanos
26. Understanding and Eliminating Demeaning Behavior
27. Managing Classroom Behavior
28. The Ability to Administer First Aid

The third and fourth Work Units will be the completion of work in progress. The decision as to wnether a competency unit should be placed in the third or

fourth unit was based upon the extent of its development at this time and the personnel available for the development. We had intentionally started on a variety of competency units instead of a logical cluster in order to gain experience in developing different kinds of units to meet different objectives. For instance, the first unit on the general understanding of the program is a fairly straightforward presentation of information and the competency to be acquired is intellectual understanding. The unit on the use of toys and games consists mostly practicing processes with children in the classroom and the teacher competencies are all stated in behavioral terms. The competency unit on eliminating demeaning behavior that has racial overtones deals primarily with attitudes and values. The competency would be the individual's ability to recognize demeaning behavior. We see teaching this competency as a more complex task than teaching the skill to help children develop some kind of cognitive ability.

This decision to start with a number of competency units should pay off beginning the second year of the development because by developing a variety we will have learned how to shorten the time it takes to move a unit through our development cycle, i.e., we should be able to eliminate the field testing or the operational testing.

We first tried to cluster the units on some logical bases such as those dealing with intellectual development, those dealing with the understanding of the child's language, cultural background and life style, and those dealing with management, planning and working with other adults, but we gave up this kind of organization scheme because it was an ineffective use of staff time. A more efficient scheme was to sequence units in a cluster so the same team could develop the entire cluster rather than move from one to another. This became the basis for determining what competency units constituted Work Units. At a milestone the team would either move on to develop the next unit or recycle to

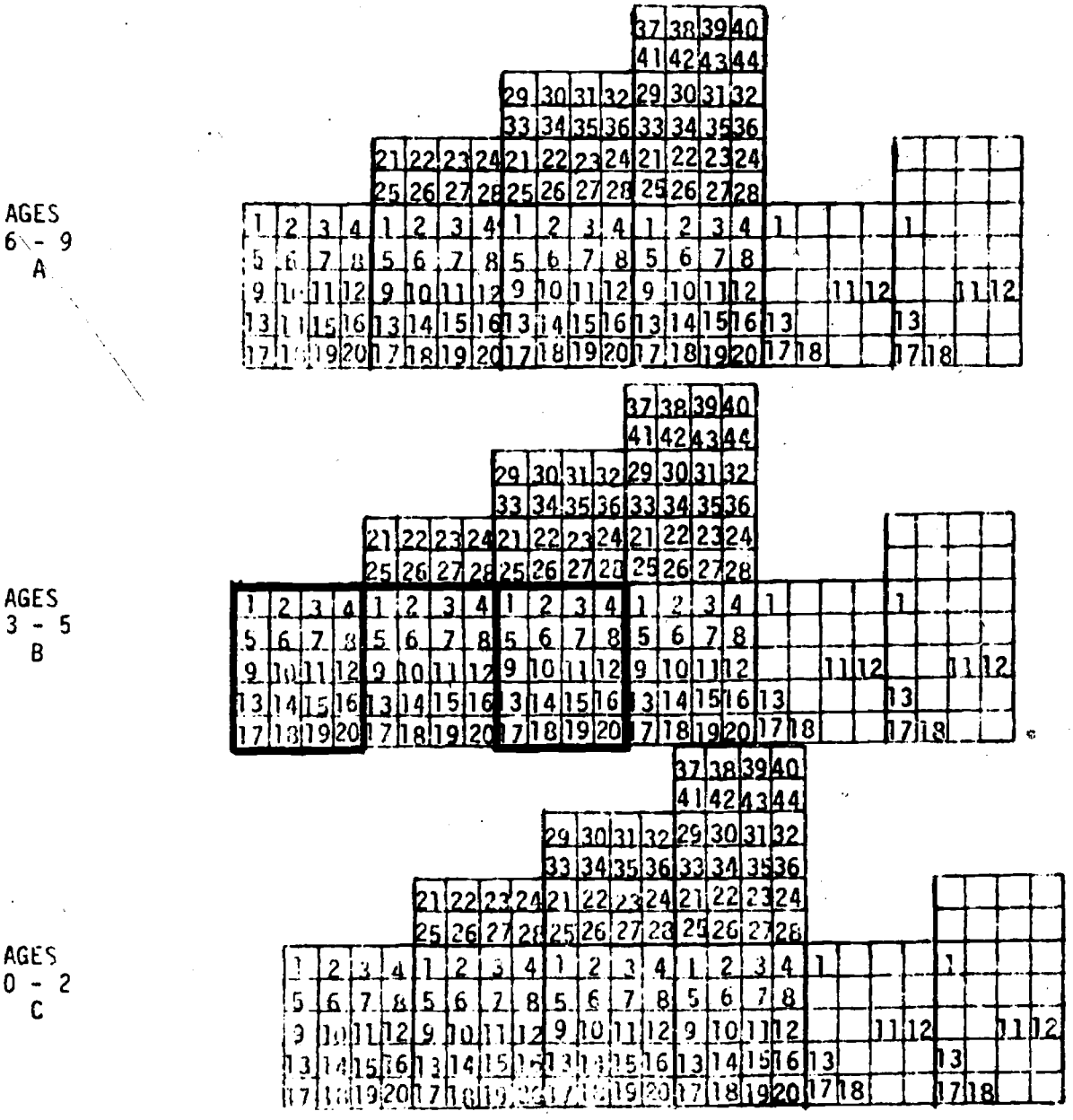
bring the first unit up to the criteria that had been set.

Major shifts in personnel have occurred. Marta Ziegenhagen replaces Glen Nimnicht as program director. As the director of the division in which the program is located, Glen Nimnicht will supervise the program and coordinate it with the other programs within the division. Pat Johnson, who has been on the Follow Through training staff, is in charge of the first Work Unit--Developing Relationships with Colleges and Universities and will develop some of the competency units. Keith Alward is in charge of Work Unit II --Developing the Assessment System. We anticipate the addition of one other key staff member to work with all the development teams on evaluating the individual units and clusters of units. Mike Valenta will be in charge of the management system.

CHART I

SCHEMATIC MODEL OF THE COMPLETED TRAINING SYSTEM*

1 Teacher Assistant	2 Teacher	3 Program Advisor	4 Program Director	5 Parent Coordinator	6 Social Services Worker



*The numbers within the body of the chart refer to competency units. Table 1 on pp. 9 to 11 lists the number and title of each competency unit. As Table 1 indicates, some competency units change in content and/or procedures for personnel working with different age groups.

PROGRAM RESUME

Program Title: Flexible Training System for Teacher Assistants

Approved Contract Period 12/1/73 to 11/30/75

Program Director Marta Ziegenhagen

PROGRAM RESUME:

The objective of the program is to produce a Flexible Training System for teacher assistants that will make it possible for them to function effectively in centers or classrooms for three-, four- and five-year-old children that satisfy the conditions specified in the Basic Program Plan (pages 7 to 22). In order to function effectively in these classrooms, they will be able to perform all of the behaviors described in the 21 competency units that will be developed. Eighty percent of the teacher assistants who undertake the program and remain in it will meet minimum standards on all statements of understandings and behaviors.

The strategy is to develop a Flexible Training System composed of an assessment system and 21 competency-based training units that can be used by colleges or universities or local institutions, such as public schools or Head Start agencies independent of the Laboratory, after a brief training period for the individual who will train the teacher assistants. (We will tentatively define "brief training" to mean one to four weeks.) Cooperating colleges and universities will award regular credit for each unit on the basis of a test of knowledge or observed behavior rather than on the basis of a given number of hours of instruction.

The expected outcome is a Flexible Training System for teacher assistants consisting of:

A. Training for the teacher trainers;

B. An assessment system consisting of seven competency units;

PROGRAM RESUME

Program Title: Flexible Training System for Teacher Assistants

Approved Contract Period 12/1/73 to 11/30/75

Program Director Marta Ziegenhagen

PROGRAM RESUME:

C. Twenty-one competency units for teacher assistants;

D. Arrangements made with 10 cooperating colleges or universities to award credit on the basis of competency;

E. Training and credit received by at least 100 teacher assistants;

F. A model for developing a competency-based program for other staff members in Early Childhood programs and for teacher assistants working with children younger than age three and older than age five.

CONTRACT NO. :
INSTITUTION : Far West Laboratory for Educational Research and Development
DATE SUBMITTED: February 21, 1973

Form A-2

PROPOSED SCOPE OF WORK

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS
For Period 12/1/72 to 11/30/75

Work Unit Code and Name RELATIONSHIPS WITH COLLEGES & UNIVERSITIES--WORK UNIT I Start date 12/1/72 End date 11/30/75

Work Unit Objectives: Working relationships with ten institutions. Four institutions will use the entire system to train and grant credits to Teacher Assistants, and use some of the units in preservice training of prospective teachers. Six institutions will use at least five of the competency units and grant credits based upon tested or observed actual competencies.

Total Projected Cost (By Contract Year) FY 73 29,774 FY 74 30,799 FY 75 51,766

Program Director Marta Ziegenhagen

PROPOSED SCOPE OF WORK - BY MILESTONES	SCHEDULED DATES Start	SCHEDULED DATES End	ESTIMATED COSTS
MILESTONE A: A decision by two institutions to use competency units in preservice and inservice training. Expected outcome: Signed agreements with two universities to test the competency units, and incorporate them in their system for granting credits based upon the competencies of learners.	12/1/72	6/30/73	15,540
MILESTONE B: Establish relationships with eight other institutions. Expected outcome: One of two agreements. A. Model Builders Agreement - Where we provide consulting fees, 1/2-time graduate assistants to assist staff in charge, materials and help to design their curricula. B. Field Testing Agreement - Where we provide materials and training in exchange for the field testing and reporting on effectiveness of the units.	7/1/73	6/30/74	28,171
MILESTONE C: Ten institutions have field tested and given feedback on at least five competency units and are in process of testing at least five more in preservice and inservice training.	7/1/74	6/30/75	46,615
PRODUCT OUTCOME D: See Work Unit Objectives above.		11/30/75	22,013

PROPOSED SCOPE OF WORK

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS
For Period 12/1/72 to 11/30/75

Work Unit Code and Name DEVELOPING THE TOTAL ASSESSMENT SYSTEM--WORK UNIT II Start date 12/1/72 End date 8/31/74

Work Unit Objectives: A complete assessment system for assessing the competencies of teachers and teacher assistants in responsive classrooms. It will consist of: 1.) A general assessment instrument that will not require more than one day to use and provide feedback to the teacher; and six additional units for in-depth assessment; 2.) Six competency units to train observers in the use of the total system.

Total Projected Cost (By Contract Year) FY 73 184,969 FY 74 121,683 FY 75 -0-

Program Director Marta Ziegenhagen

PROPOSED SCOPE OF WORK - BY MILESTONES	SCHEDULED DATES Start	SCHEDULED DATES End	ESTIMATED COSTS
MILESTONE A: Completion of the preliminary drafts of all units with audio-visual material in rough draft or a storyboard form. Completion of one training session with Program Advisors, and receipt of their feedback. Decision: Recycle the entire development effort or revise parts of the system and proceed with the field testing. (This is a crucial point. If the decision is to recycle, it involves rescheduling the work on Work Units V and VI.)	12/1/72	5/30/73	101,982
MILESTONE B: Completion of field testing with Follow Through Program Advisors, as well as the evaluation. Decisions: 1.) The extent of the revisions that are necessary to proceed with the operational test. If extensive revisions are needed, this will postpone the test and delay the completion of the unit until January, 1975. 2.) The final form of the audiovisual material.	5/31/73	11/30/73	82,987
PRODUCT OUTCOME C: Completion of the work unit and delivery of final product and report.		8/31/74	121,683

CONTRACT NO. :
INSTITUTION : Far West Laboratory for Educational Research and Development
DATE SUBMITTED: February 21, 1973

Form A-2

PROPOSED SCOPE OF WORK

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS
For Period 12/1/72 to 11/30/75

Work Unit Code and Name COMPETENCY UNITS UNDER DEVELOPMENT--WORK UNIT III Start date 12/1/72 End date 1/31/74

Work Unit Objectives: To complete the development and testing of the following competency units: Understanding the Total Program; Using Toys and Games; Developing Children's Senses and Perceptions; Developing Children's Concept-Formation Ability.

Total Projected Cost (By Contract Year) FY 73 99,383 FY 74 18,356 FY 75 -0-

Program Director Marta Ziegenhagen

PROPOSED SCOPE OF WORK - BY MILESTONES	SCHEDULED DATES		ESTIMATED COSTS
	Start	End	
MILESTONE A: Completion of the field testing for the four units. (Please note that the 1st milestone [i.e. preliminary test] already has been completed.) Decision: The extent to which the units must be revised before proceeding with the operational test. This should not delay the completion of the units because the testing cannot proceed before September. If little revision is required the initial work on Work Unit V could be undertaken earlier than anticipated.	12/1/72	7/31/73	65,468
PRODUCT OUTCOME B: Completion of the Work Units and delivery of the products and reports.		1/31/74	52,271

PROPOSED SCOPE OF WORK

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS
For Period 12/1/72 to 11/30/75

Work Unit Code and Name COMPETENCY UNITS UNDER DEVELOPMENT--WORK UNIT IV Start date 12/1/72 End date 11/30/74

Work Unit Objectives: To complete the development of the following competency units: Understanding and Eliminating Demeaning Behavior; Developing Children's Problem-Solving Ability; Helping Children Develop a Healthy Self-Concept; Analysing Materials for Blacks and Chicanos; Developing Children's Language Skills; Using Children's Spontaneous Play for Learning.

Total Projected Cost (By Contract Year) FY 73 173,395 FY 74 128,594 FY 75 -0-

Program Director Marta Ziegenhagen

PROPOSED SCOPE OF WORK - BY MILESTONES	SCHEDULED DATES Start	SCHEDULED DATES End	ESTIMATED COSTS
MILESTONE A: Drafts and preliminary testing completed Decision: To recycle and delay the field testing or to revise and proceed on schedule.	12/1/72	9/30/73	150,494
MILESTONE B: Completion of field testing. Decisions: 1) To revise and if necessary delay the operational testing or to revise and proceed on schedule. 2) To initiate work on Work Unit VI or to revise starting schedule.	10/1/73	5/31/74	80,521
PRODUCT OUTCOME C: Completion of competency units and delivery of final products and reports.		11/30/74	70,974

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DATE SUBMITTED: February 21, 1973

Form A-2

PROPOSED SCOPE OF WORK

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS
For Period 12/1/72 to 11/30/75

Work Unit Code and Name DEVELOPMENT OF FIVE COMPETENCY UNITS--WORK UNIT V Start date 12/1/73 End date 11/30/75

Work Unit Objectives: To develop and test the following competency units:
Modelling Language Skills; Working with Parents; Developing Children's Social Concepts;
Assessing Children's Needs and Progress; Managing Children's Behavior in a Group.

Total Projected Cost (By Contract Year) FY 73 -0- FY 74 110,429 FY 75 205,190

Program Director Marta Ziegenhagen

PROPOSED SCOPE OF WORK - BY MILESTONES	SCHEDULED DATES		ESTIMATED COSTS
	Start	End	
MILESTONE A: Completion of preliminary testing. Decision: To recycle and delay field testing or to revise and proceed on schedule.	12/1/73	6/30/74	59,559
MILESTONE B: Completion of field testing. Decision: To revise and, if necessary, delay the operational testing or to revise and proceed on schedule.	7/1/74	5/31/75	147,470
PRODUCT OUTCOME C: Completion of all competency units and delivery of final products and reports.		11/30/75	108,590

CONTRACT NO.
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DATE SUBMITTED: February 21, 1973

Form A-2

PROPOSED SCOPE OF WORK

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS
For Period 12/1/72 to 11/30/75

Work Unit Code and Name DEVELOPMENT OF SIX COMPETENCY UNITS--WORK UNIT VI Start date 7/1/74 End date 11/30/75

Work Unit Objectives: To develop and test the following competency units:

Understanding the Child's Background; Helping Children Develop Self-Control; The Ability to Administer First Aid; Understanding the Child's Language; Managing Children's Behavior in a Group; Working Effectively with Other Adults.

Total Projected Cost (By Contract Year) FY 73 -0- FY 74 42,059 FY 75 192,664

Program Director Marta Ziegenhagen

PROPOSED SCOPE OF WORK - BY MILESTONES	SCHEDULED DATES Start	SCHEDULED DATES End	ESTIMATED COSTS
MILESTONE A: Completion of preliminary testing. Decisions: To recycle and delay field testing or to revise and proceed on schedule.	7/1/74	1/31/75	76,036
MILESTONE B: Completion of field testing Decisions: To revise and, if necessary, delay the operational testing or to revise and proceed on schedule.	2/1/75	5/1/75	70,821
PRODUCT OUTCOME C: Completion of all competency units and delivery of final products and reports.		11/30/75	87,866

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DATE SUBMITTED: February 21, 1973

Form A-3

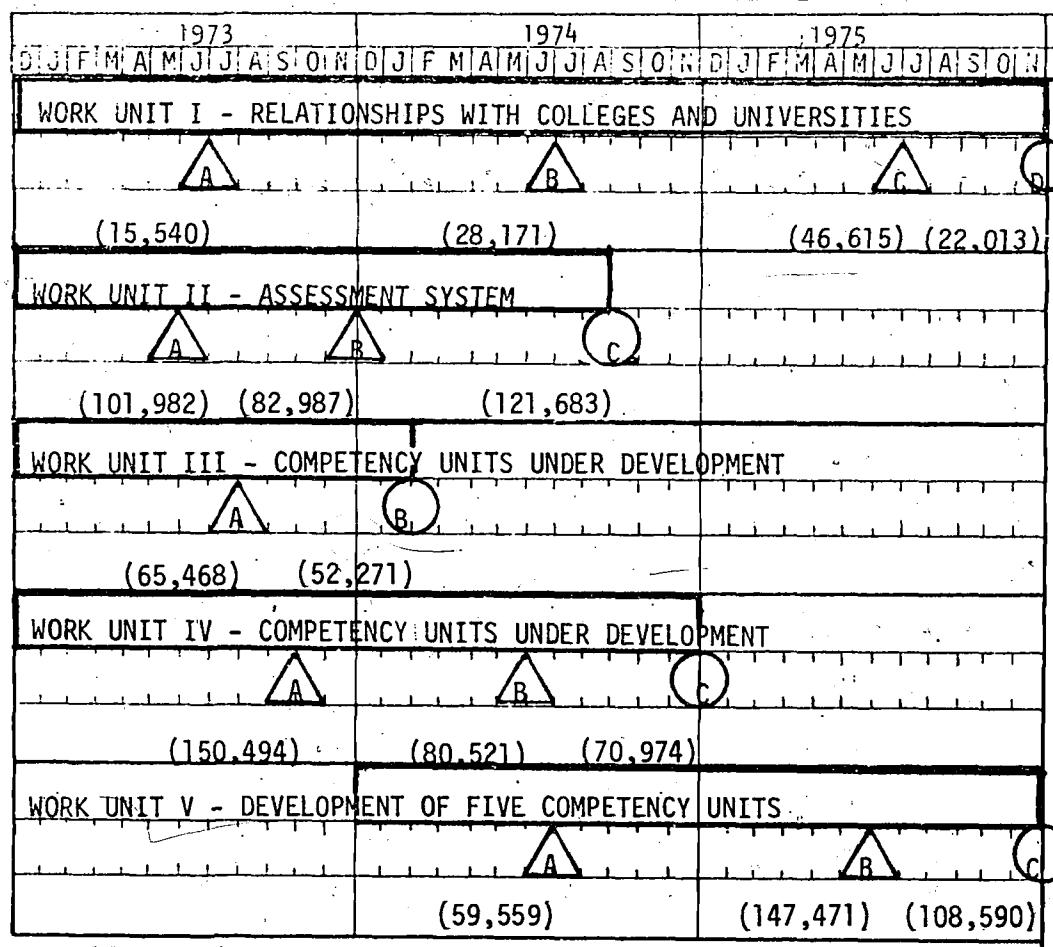
MANAGEMENT PLAN

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS

For Period 12/1/72 to 11/30/75

Program Objective DEVELOPMENT OF COMPETENCY UNITS FOR TEACHER ASSISTANTS

Program Director Marta Ziegenhagen



KEY TO MILESTONES

	Milestone Title	Dates
A.	Relationship with Two Institutions	6/30/73
B.	Relationship with eight Institutions	6/30/74
C.	Field Test	6/30/75
D.	Completion	11/30/75
A.	Preliminary Test	5/31/73
B.	Field Test	11/30/73
C.	Completion	8/31/74
A.	Field Test	7/31/73
B.	Completion	1/31/74
A.	Preliminary Test	9/30/73
B.	Field Test	5/31/74
C.	Completion	11/30/74
A.	Preliminary Test	6/30/74
B.	Field Test	5/31/75
C.	Completion	11/30/75

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DATE SUBMITTED: February 21, 1973

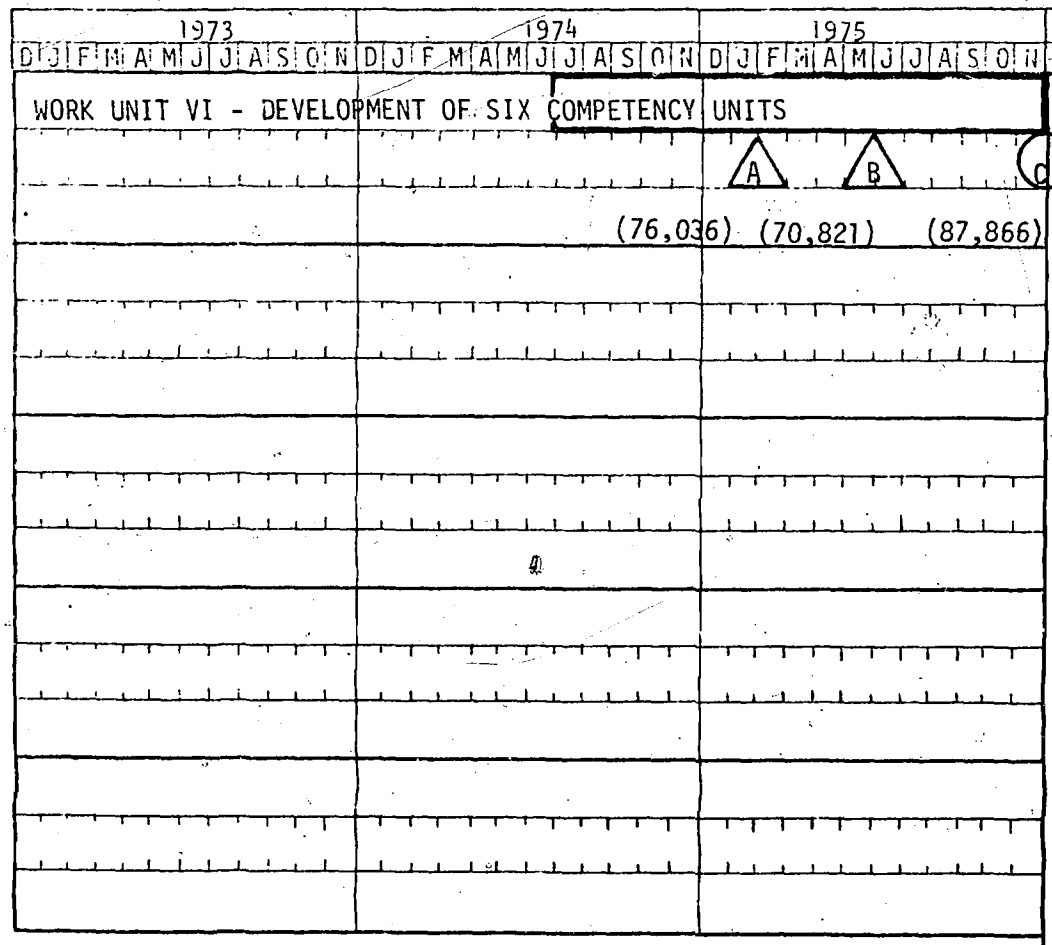
Form A-3

MANAGEMENT PLAN

FLEXIBLE TRAINING SYSTEM FOR TEACHER ASSISTANTS
For Period 12/1/72 to 11/30/75

Program Objective: Development of Competency Units for Teacher Assistants

Program Director: Marta Ziegenhagen



KEY TO MILESTONES

	Milestone Title	Dates
A.	Preliminary Test	1/31/75
B.	Field Test	5/31/75
C.	Completion	

PRODUCT REGISTER

Work Unit Code & Name : Work Unit I - Relationships with Colleges & Universities
Product Title : Same
Estimated Completion Date: 11/30/75
Product Description : A set of quidelines and procedures for working with universities in implementing the Flexible Training System.

Product Objectives:

1) to develop competency - based models for teacher education with some universities while they field test our competency units.
2) to expand the existing teacher education programs in some universities that are not completely ready to move to competency-based programs.

PRODUCT REGISTER

Work Unit Code & Name : Work Unit II - Assessment System
Product Title : Assessing the Knowledge of the Learners
Estimated Completion Date: 8/31/74
Product Description : A self-assessment instrument and an instructional manual.
Product Objectives: To enable the learners to use techniques and methods which will yield information about the learners that will:
1) facilitate the personalizations of learning experiences
2) allow the assessment of learners' progress from their individual frames of reference.

Product Title : Assessing the Cultural Relevancy of the Educational Environment
Estimated Completion Date: 8/31/74
Product Description : A self-assessment instrument and an instructional manual.
Product Objectives: To enable the learner to assess how relevant is the educational environment according to the cultural frame of reference of the learners.- Emphasis will be given to assessing who are the learners, and in what ways are they reflected in the learning environment.

Product Title : Assessing the Use of Physical Space and Resources
Estimated Completion Date: 8/31/74
Product Description : A self-assessment instrument and an instructional manual.
Product Objectives: To enable the learner to evaluate the arrangement of classroom space and materials. Specifically the relationship to the following issue:
1) how arrangement of space and materials affect the functioning of the total classroom;
2) criteria for developing and assessing types of classroom space;
3) relationship between organization of materials and classroom space.

Product Title : Assessing Problem Solving in a Responsive Environment
Estimated Completion Date: 8/31/74
Product Description : A self-assessment instrument, an instructional manual, a videotape.
Product Objectives: To enable the learner to explore and assess his/her own problem solving strategies and to translate them into teaching behaviors that will help children become more fluent problem solvers.

Product Title : Assessing Teacher-Learner Interactions
Estimated Completion Date: 8/31/74
Product Description : An observation and self-assessment instrument, an instructional manual, a videotape.
Product Objectives: To enable the learner to use self-assessment techniques to analyze how his/her interaction with children contribute to enhancing their self-concept and problem-solving abilities.

PRODUCT REGISTER

Work Unit II - Continued :

Product Title : Assessing Learning Activities
Estimated Completion Date: 8/31/74
Product Description : An observation instrument, an instructional manual and a videotape.
Product Objectives: To enable the learner to use an observation instrument to identify the quality of language, math and other curricular activities according to responsive criteria.

Product Title : Total Assessment System
Estimated Completion Date: 8/31/74
Product Description : A set of assessment instruments, an instructional manual and a set of videotape.
Product Objectives: To develop a set of instruments that will enable the learner to
1) assess the organization of the educational environment and the quality of learning taking place;
2) identify the most salient needs and next steps on training for more effective functioning.

PRODUCT REGISTER

Work Unit Code & Name : Work Unit III - Competency Units Under Development
Product Title : Understanding of Total Program
Estimated Completion Date: 1/31/74
Product Description : A competency unit consisting of a written manual, two booklets, several slide sets.
Product Objectives: To give the learner an understanding of:
1) the general goals of early childhood education;
2) the approaches used in various early childhood programs;
3) the particular approach used in his/her center.

Product Title : Use of Toys and Games
Estimated Completion Date: 1/31/74
Product Description : A competency unit consisting of a two written manuals, a color film, eight color filmstrips with audio cassette tapes, and eight educational toys.
Product Objectives: To enable the learner to use a responsive approach in using toys and games; to help children learn specific skills and concepts, for example, to adjust the level of difficulty of the game to the child, and to allow the child to change the rules of the game or stop playing whenever he wants.

Product Title : Senses and Perceptions
Estimated Completion Date: 1/31/74
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to use a variety of materials and learning situations to develop a child's visual, auditory, tactile, smell and taste senses, and develop the child's ability to describe what he sees or feels.

Product Title : Concept Formation
Estimated Completion Date: 1/31/74
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to help children learn relational and category concepts using their cultural perspective and their knowledge and experience base.

PRODUCT REGISTER

Work Unit Code & Name : Work Unit IV - Competency Units Under Development
Product Title : Demeaning Behavior
Estimated Completed Date: 11/30/74
Product Description : A competency unit consisting of a written manual and a set of videotapes.
Product Objectives: To enable the learner to understand and eliminate racially demeaning behavior.

Product Title : Problem Solving
Estimated Completed Date: 11/30/74
Product Description : A competency unit consisting of a written manual, a set of matrix games.
Product Objectives: To enable the learner to understand two kinds of problems, non-interactional and interactional, and to help children learn various problem-solving strategies, such as inductive and deductive thinking, eliminating knowns to discover unknowns, and extending patterns.

Product Title : Self-Concept
Estimated Completion Date: 11/30/74
Product Description : A competency unit consisting of a written manual, a set of videotapes and a set of anecdotal cards.
Product Objectives: To enable the learner to:
1) define healthy self-concept and understand its importance;
2) understand why "taking credit" is important to self-concept development;
3) recognize demeaning behaviors which are destructive to healthy self-concept;
4) recognize when a child is putting himself down or thinking himself overly important.

Product Title : Analysis of Materials for Blacks and Chicanos
Estimated Completion Date: 11/30/74
Product Description : A competency unit consisting of a written manual, a set of pictures.
Product Objectives: To enable the learner to evaluate pictures and books for their cultural relevance to Black and Chicano children.

Product Title : Language Development
Estimated Completion Date: 11/30/74
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to teach language skills and extend the children's use of language by using the child's natural and spontaneous language and by using a variety of techniques, including dictation from the child and the child's art and movement.

PRODUCT REGISTER

Work Unit IV - Continued :
Product Title : Using Spontaneous Play
Estimated Completion Date: 11/30/74
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to recognize in the child's spontaneous play opportunities for learning experiences in the child's spontaneous play, and to build upon these learning experiences.

CONTRACT NO. :
INSTITUTION : Far West Laboratory for Educational Research and Development
PROGRAM : Flexible Training System for Teacher Assistants
DATE SUBMITTED: February 21, 1973

PRODUCT REGISTER

Work Unit Code & Name : Work Unit V - Development of Five Competency Units
Product Title : Encouraging Self-Expression Through Language
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a wirtten manual, a set of videotapes.
Product Objectives : To enable the learner to:
1) help children use language to express their emotions;
2) extend language from one activity to another;
3) help children share their language with each other.

Product Title : Working with Parents
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to:
1) understand the cultural background and life styles of parents of children in his/her center;
2) understand the role of parents in early childhood education;
3) explain the educational program to the parents;
4) recognize the rights of parents to be involved in the decision-making process and involve them in that process;
5) discuss with parents the development and behavior of their children;
6) use parents as educational resources in the classroom.

Product Title : Developing Children's Social Concepts
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual.
Product Objectives : To enable the learner to help children learn about cooperating and sharing; ownership (loaning and returning); the right of others to play alone; and how to play together.

Product Title : Assessing Children's Needs and Progress
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual and a set of samples of children's work.
Product Objectives : To enable the learner to:
1) understand the use and limitations of the most common standardized tests;
2) use some tests to determine whether a child has a physical or emotional handicap that requires the help of a specialist;
3) to assess children's needs and progress by observing them in the classroom.

CONTRACT NO. :
INSTITUTION : Far West Laboratory for Educational Research and Development
PROGRAM : Flexible Training System for Teacher Assistants
DATE SUBMITTED: February 21, 1973

PRODUCT REGISTER

Work Unit V (continued)

Product Title	:	Managing Classroom Behavior
Estimated Completion Date:		11/30/75
Product Description	:	A competency unit consisting of a written manual and a set of videotapes.
Product Objectives	:	To teach the learner how to set reasonable limits and rules that will be understood, honored, and protected by children and adults.

PRODUCT REGISTER

Work Unit Code & Name : Work Unit VI - Development of Six Competency Units

Product Title : Understand Child's Background
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to:
1) understand and accept the background and culture of each child in his/her center;
2) include the child's culture and life style in the curriculum and the classroom environment;
3) use the understanding of the child's background to help the child understand the social, economic, and political system in which he lives.

Product Title : Help Children Develop Self-Control
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to:
1) understand the importance in education of helping children learn to cope with their emotions and become self-directed;
2) help children learn to express themselves in positive rather than negative ways to make choices; to delay gratifications; and to accept responsibility for their actions.

Product Title : The Ability to Administer First Aid
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to:
1) administer first aid treatment for a variety of injuries that may occur at the center or on a field trip;
2) recognize unusual behavior or symptoms that indicate a need for health care.

Product Title : Understand Child's Language
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual.
Product Objectives: To enable the learner to understand the major dialects or languages of the children in the center.

Product Title : Manage Children's Behavior in a Group
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual.

Product Objectives: To enable the learner to use certain techniques in managing children's behavior in a group that will lead the children to develop self-control.

PRODUCT REGISTER

Work Unit VI - Continued

Product Title : Work Effectively with other Adults
Estimated Completion Date: 11/30/75
Product Description : A competency unit consisting of a written manual and videotape.
Product Objectives: To enable the learner to:

1) define the role of each adult in the center;
2) define his/her expectations of the other adults and assist others in defining expectations;
3) listen and respond to the concerns of other adults;
4) understand similarities and differences in the cultural values and behavior of the adults in the center.

Response to a Request for Information and Questions Raised By the Review Panel on the Basic Program Plan for a Training System of Staff in Early Childhood Education Programs

(Response to Marc Tucker's Letter)

October, 1972

RESPONSE TO A REQUEST FOR INFORMATION AND QUESTIONS RAISED BY THE REVIEW PANEL ON THE BASIC PROGRAM PLANS FOR A TRAINING SYSTEM OF STAFF IN EARLY CHILDHOOD EDUCATION

I. A Management Plan for Continuous Monitoring

In devising a management plan for continuous monitoring, three major concerns must be accounted for: (1) monitoring the development and testing of competency units, clusters of units, sub-systems, and the total system; (2) monitoring the training of trainers (i.e., Laboratory staff members and Program Advisors for school districts or other agencies); and (3) managing development of the delivery system.

Monitoring the Development and Testing of Competency Units

As we have pointed out elsewhere, the competency units that have been identified are essentially defined from experience in previous training efforts; these become evident as teachers and Program Advisors state their own concerns and needs for training. Since the program plans were submitted last spring, each general statement has gone through a first refinement and a brief paragraph has been written defining the general objectives. Three Q-Sorts have been developed using the competencies as items in the sort: one for the Laboratory's staff and Program Advisors with 31 items (36 - 5 that have not been defined); one for teachers with 25 items (28 - 3 that have not been defined); and one for assistant teachers with 19 items. Each respondent is asked to sort the items twice. The first sort is to state for which competencies the individual feels most competent, on to those where he/she feels the least competent. The second sort is based upon what he/she believes is most important, on down to the least important. The combination of the two sorts provides data on importance and a self-assessment of needs for each

individual. This information provides the basis for planning training for each individual (to be considered in the section on management) and determines the priorities for the initial development of competency units. As the development and training progress, the trainees will be asked to report the sorts so that the Laboratory will recieve constant feedback from the field to provide data for a periodic reassessment of development priorities.

For each individual competency, the monitoring process is based upon a number of checkpoints. The tables, beginning on page 61 of the Basic Program Plan, demonstrate the monitoring process. Time lines will be established for each competency unit with checkpoints to indicate when the outline is complete, when the first draft is complete, successful completion of the preliminary test, completion of the performance test and of the operational test, etc. At any point, a decision can be made to proceed, revise and proceed, recycle, or discontinue.

As each unit is completed, the competencies it purports to develop will be recorded to show the inter-relationship of the units and to modify or redefine other units that are still under development or planned.

When a cluster of competencies has been developed and tested, they will be analyzed as a group to see if additional units are needed in the cluster or if a unit is needed to bridge one cluster to another one. The same procedure will be used in developing the training programs for different roles or positions, such as that of the assistant teacher or teacher.

In other words, the original conceptualization of the total system represents only a crude model which is to be continually refined as each unit and each cluster of units are developed because the continuous testing and assess-

ment provide a flexible mechanism for modifying or redefining all future development.

2. Monitoring the training of individuals in the system

The problems that must be attended to are:

1. Developing the competencies of the Laboratory's staff and trainers in the field (Program Advisors) who can test the individual units.
2. Knowing what an individual thinks he can do when the training starts and what he values in the training.
3. Knowing what an individual is actually competent in at the time the training starts.
4. Tracking the training that different individuals receive.

The management plan for attending to these problems is:

Each individual in the training system, starting with the Laboratory's staff, will have a profile card. The first entry will come from data received from the two Q-sorts described above.

This information will tell us what the individual believes is important and the relationship of this to a self-assessment of his competency.

From this information, the staff will know what competencies to assess first for each individual and with which competencies to start the training.

The second entry on the individual's profile card will be the competency units or units that the individual used to enter the training program.

The third entry will be the competencies the individual is judged to have shortly after undertaking the training. This may appear to be reversal of good procedure; that is, the observation should proceed any training.

The reason for using this strategy is that the trainee has already identified a unit of training to achieve competencies he sees as important but feels he lacks. Starting with that unit means we are responding to the learner and thus should create a good learning situation; it also buys time to help the learner understand the system before he is questioned and observed to determine his competencies.

From a management point of view, we will be able to obtain immediate printouts showing what staff members and Program Advisors are capable of teaching, how many individuals have recieved training on any one unit, and similar useful information. For assessment purposes, we will have a record of what teachers or assistants could do when they entered the system, what competencies they have acquired, and what they think is important. These data will provide us with a bank of information to use in analyzing the effect upon teacher behavior. Furthermore, we can draw samples of individuals from the system who have different competencies and relate this information to the behavior of children. This topic will be expanded in the comments on evaluation.

3. Managing the development of the delivery system

The first two management problems discussed above relate to developing and testing the Flexible Training System. They could be carried out without concern for delivering the program to large numbers of people over a wide geographic area. Obviously, an undertaking of this magnitude can be justified only by planning for extensive use of the final product.

The major strategy we propose for a delivery system is to work with colleges and universities. The essence of the proposal is a triangular relationship between the developer (Laboratory), the local agency who has a trainer (Program Advisor), and the university or college which provides the

evaluator or certifier. The primary logic is that the university or college can plug into the system by providing credit for competencies as an equivalent to hours of training*.

There are also some possible worthwhile side effects, such as introducing the concept of credit for competencies as an alternative to credit for hours of attendance and work in a conventional college course.

The crucial point, however, is that this triangular relationship can be replicated an undertermined number of times. The major constraint is the capacity of the Laboratory's staff to train Program Advisors and to establish relationships with colleges and universities.

The management plan is to start with a limited involvement of colleges and universities as described in Component V (BPP, page 73) but to capitalize on opportunities for involving other colleges and universities as these opportunities become available within the capacity of the staff to respond. The capacity to respond will increase with each year of development because, as the Laboratory trains local Program Advisors and establishes relationships with universities and colleges, it will be building toward its withdrawal from the triangular relationship.

The management plan for working with local agencies is to establish a close working relationship with a few agencies to provide sites for preliminary and performance testing. At the same time, the Laboratory will remain ready to capitalize on opportunities where local agencies are willing to participate

*Serious questions can be raised about the strategy of working through colleges and universities to produce an alternative route to certify teacher assistants. We recognize those limitations and we will explore alternatives but the crucial consideration must be that the teaching assistant receive some official recognition of her competence that can be accepted for certification or licensing purposes.

in field and operational testing by assuming part or all of the costs involved.

II. The Comments and Questions the Review Panel Raised in the Following Statements:

1) A need for an assessment plan for determining the effects of the program on teachers;

2) The data collection system is global and oriented mostly to systems rather than child-oriented.

These points seem to be related to a more general question of normative evaluation and summative evaluation. When we review the plan for evaluation on pages 76-78, the comments of the Review Committee certainly seeem relevant. The plan as presented is essentially normative evaluation which reflects some concern for the efforts upon the teacher and assistant behaviors but makes no mention of the possible effect upon children's behavior.

In the description of the monitoring of the training, we described the system for collecting data on the teachers' self-assessment, on what the teachers value or perceive is important, and on the training the teacher receives. These data obviously provide a rich data bank for assessing the effects of the training on the teacher's behavior.

Furthermore, once we can specify the behavior of the teacher, a basis exists for assessing the effects upon children. We are initiating the project based upon a substantial bank of data which so far indicates that adults trained in the Responsive Program do produce desirable changes in children's behavior. A very cursory report on some of these data can be found in the Appendix; moreover, we are continuing to collect and analyze additional data. We are aware, however, that this is not an adequate substitute for hard evidence of the effectiveness of the proposed program's effect upon the behavior of children.

We are also aware of the extreme difficulty that researchers have had in demonstrating a significant effect upon children of specific behaviors of the teacher. One problem, of course, has been that the researchers have been looking for relatively small differences in behavior over a fairly short period of time with a small number of cases. The probability of a type two error under such circumstances is high. We might be able to avoid this problem because of the relatively rich data we will have on the teachers' understandings and behaviors. It certainly would enhance the program if we could demonstrate the effects of different clusters of teachers' competency on children's behavior; obviously this would also be a desirable improvement on the plans for evaluating the program. Our proposal is that this program's duration be extended one year; in that case, during 1974 the Laboratory would present a detailed plan for summative evaluation to be conducted in 1976. The evaluation would include both an assessment of the effect upon teachers' behavior and children's behavior. By 1974, we should have the necessary data to provide a detailed plan for a final evaluation.

III. The Review Committee Asked that the Laboratory Provide Some Assurance that Funding from Other Sources such as Follow Through and Head Start Will Be Available in FY 1973.

The current funding for the Follow Through program ends on June 30, 1973. In addition to conducting on-site training and three weeks of off-site training for each district, the grant explicitly covers the development of competency units to be used in the training. Approximately ten staff members will devote one-half of their time to developing units; in FY 1973 this amounts to approximately $65,000 in direct development plus the cost of the preliminary testing of the units. Follow Through announced plans for the year beginning July 1, 1973, to continue the same level of support but, of course, this funding is dependent upon Congressional appropriations for the program.

The current funding for the training of Head Start teachers and assistants is $85,000 for the year ending on June 30, 1973. In addition, local agencies are paying the cost of their own Program Advisor plus all travel expenses and $600 per Program Advisor for training. The total funds will be approximately $110,000 plus local expenses for the Program Advisors. Since this entire program is based upon developing and testing competency units, the investment in FY 1973 will be over $50,000. Since the Office of Child Development has set the training and certification of Early Childhood Associates, a competency-based program, as the top priority in that office, the probability of continued funding after July 1, 1973, is high. Hence outside support of $115,000 is assured and the probability of an equal amount is high.

IV. The Request to Provide Comments and Support Data from Other Funding Sources Concerning the Value of the Proposed Activities

Because of the short time for responding to the questions that have been raised, it is impossible to provide written comments but the evidence of support from the Follow Through program is their stated position to encourage Follow Through sponsors to develop delivery systems that could be used to spread the effort of Follow Through programs beyond the experimental school districts.

At the request of the national Follow Through director, the Laboratory submitted a plan in July that described the training system embodied in this proposal.

In a telephone conversation, Raymond Collins, Chief, Program Development and Innovation Division, Office of Child Development, expressed pleasure at the fact that through the Laboratory a cooperative effort between NIE and OCD could be established which would be of mutual benefit to both programs.

Furthermore, he would give favorable consideration to a request for additional funds during FY'73 to enable the Laboratory to make the competency units being developed available to other grantees who are developing competency-based training for the Early Childhood Associate program.

GN:
9/29/72

BASIC PROGRAM PLAN

A Training System for Staff of Early Childhood Education Programs

A PROGRAM OF DIVISION III

March 1972

FAR WEST LABORATORY FOR EDUCATIONAL RESEARCH AND DEVELOPMENT

1 Garden Circle, Hotel Claremont, Berkeley, California 94705

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LIST OF TABLES AND CHARTS

SUMMARY DATA SHEET

Institution Code: R36F

Program Code: R36F6

Date Prepared: 3/27/72

Name and Location of Institution:

Far West Laboratory for Educational Research and Development
1 Garden Circle, Hotel Claremont
Berkeley, California 94705

Director:

Glen P. Nimnicht

Title of Program:

A Training System for Staff of Early Childhood Education Programs

Staff Member in Charge:

Glen P. Nimnicht

Start and End Dates of Program:

12/1/72 - 11/30/76

Costs:

	DRDR Basic Contract	Other Federal	Contributions Non-Federal	Local	Total
Investment thru 11/30/72	70,000	167,000	-0-	-0-	237,000
Projected Costs	1,212,000	75,000	-0-	-0-	1,287,000
FY 1973	256,000	75,000	-0-	-0-	331,000
FY 1974	306,000	-0-	-0-	-0-	306,000
FY 1975	326,000	-0-	-0-	-0-	326,000
FY 1976	324,000	-0-	-0-	-0-	326,000

PROGRAM REGISTER

Program code: R36F6

Institution: Far West Laboratories for Educational Research Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Code no.	Title of component or activity	Person in charge	Start and end date
R36F6C	Component I. Revising Identification of Competency Units to be Developed and System Development	Glen P. Nimnicht	12/1/73-11/30/74
R36F6D	Component II. Identifying the Resources That are Available for the Development of Competency Units.	Oscar J. Uribe	12/1/72-11/30/73
R36F6E	Component III. Developing and Testing Individual Competency Units.	Oscar J. Uribe Francine N. Lewis	12/1/72-11/30/76
R36F6F	Component IV. Developing and Testing Clusters of Competencies for a Certain Role, and Testing the System	Nicholas F. Rayder	12/1/73-11/30/76
R36F6G	Component V. Developing Relationships with Colleges and Universities to Work out a System for Providing Credit Based upon the Competency Units and Levels of Competency	Glen P. Nimnicht	12/1/72-11/30/76
R36F6H	Component VI. Developing a Plan for Dissemination and Utilization	Glen P. Nimnicht	12/1/72-11/30/76

PROGRAM RESUME

Program code: R36F6

Institution: Far West Laboratory for Educational Research and Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Begin and end dates of (proposed) Program: 12/1/72 - 11/30/76

Staff member in charge: Glen P. Nimnicht

Resume:

The proposed program is a flexible training system for early childhood education staff including teacher assistants, teachers, teacher trainers, program directors, parent coordinators, and social service workers. The system specifies a set of competency units for each staff role; from these units a trainee can choose the competencies in which training would be most beneficial.

The objectives of the program are to provide a career ladder for low-income persons who are currently involved or who may become involved in early childhood education; to provide an efficient way of training the large numbers of persons who will be needed in Head Start and Day Care programs; to upgrade the quality of existing preschool programs by providing inservice training; and to provide a training system that will allow kindergarten through third grade teachers to choose from a set of competencies those that will increase their effectiveness in working with a particular group of children. The basis for the training system will be the Responsive Model Head Start and Follow Through program currently under development in the Early Childhood Education program of the Far West Laboratory for Educational Research and Development.

The training system will be developed for personnel working with children at two age levels: ages three to five and kindergarten through third grade. Many competency units are the same for both age groups, but others will require modifications in content and/or procedures. Competency units will vary in complexity and format. Some competencies will apply to all staff roles although different levels of competency may be specified for different staff roles.

Work on some units has been initiated in other programs, but this program is need to produce total system development. Phase One of development concentrates on the completion of the subsystem of 20 competency units for teacher assistants working with three- to five-year-old children, because this subsystem is the smallest segment that will constitute a complete element of the training system, and the need for this subsystem is the greatest.

COMPONENT RESUME

Component code: R36F6C

Institution: Far West Laboratory for Educational Research and Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Component title: I. Identification of Competency Units to Be Developed and System Development

Begin and end dates of (proposed) Component: 12/1/73 - 11/30/74

Staff member in charge: Glen P. Nimnicht

Resume:

The general system specifications have been developed and preliminary identification of the competencies to be included in the system has been made.

Revisions in system specification and in statements of competencies will be made in 1974 on the basis of the development completed in 1973.

COMPONENT RESUME

Component code: R36F6D

Institution: Far West Laboratory for Educational Research and Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Component title: II. Identifying the Resources That Are Available for the Development of Competency Units

Begin and end dates of (proposed) Component: 12/1/72 - 11/30/73

Staff member in charge: Oscar J. Uribe

Resume:

The materials used for development will be drawn from three sources. The first will be Division III of the Far West Laboratory for Educational Research and Development; materials available include those already developed for the existing Head Start and Follow Through training programs. Another source is other divisions within the Laboratory. The third source will be other developers in the field.

Resources available within Division III have been identified and preliminary identification has been made of seven training units developed by other divisions that could be used or modified for use as competency units.

Work planned for Phase One is to continue the search for developed units during 1973.

COMPONENT RESUME

Component code: R36F6E

Institution: Far West Laboratory for Educational Research and Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Component title: III. Developing and Testing Individual Competency Units

Begin and end dates of (proposed) Component: 12/1/72 - 11/30/76

Staff members in charge: Oscar J. Uribe and Francione N. Lewis

Resume:

This activity will require by far the largest commitment of time and funds over the life of the program. The major steps to be followed in the development of each competency unit are:

1. Detailed specification of the objectives and outcomes of the training unit.
2. Outline of the training unit content, and statement of specific criteria for determining the differential levels of developed competency and equivalence of college credits.
3. Completion of preliminary form of the unit.
4. Preliminary form testing, formative evaluation, and revision of the unit or termination of work on the unit.
5. Main field test of the effectiveness of the unit, with principal attention given to summative evaluation.

The work planned for Phase One is the completion of the 20 competency units in the subsystem for teacher assistants working with three-to five-year old children. Three of the 20 units for teacher assistants will have been completed by 1973. In 1973, nine competency units initiated under the Follow Through program will be completed and if necessary modified for personnel working with preschool children; five of these units apply to the teacher assistant subsystem. Four additional units for teacher assistants will be initiated in 1973, seven in 1974, and the remaining eight in 1975. Thus the subsystem for teacher assistants working with three- to five-year-old children will be completed by 1976.

COMPONENT RESUME

Component code: R36F6F

Institution: Far West Laboratory for Educational Research and Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Component title: IV. Developing and Testing Clusters of Competencies for a Given Role, and Testing the System

Begin and end dates of (proposed) Component: 12/1/73 - 11/30/76

Staff member in charge: Nicholas F. Rayder

Resume:

Activity in this area will begin in 1974. The developers will test clusters of competencies (groups of related competencies) by working with 60 preschool teacher assistants taking different sequences of competency units. It should be possible for an individual trainee to complete four units a year and some combination of 16 units should produce the competency required of a teacher assistant. Probably about 40 of the trainees will complete the program in three years or less, thus providing an adequate test of the subsystem for teacher assistants working with three- to five-year-old children.

COMPONENT RESUME

Component code: R36F6G

Institution: Far West Laboratory for Educational Research and Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Component title: V. Developing Relationships with Colleges and Universities to Work Out a System for Providing Credit Based Upon the Competency Units and Levels of Competency

Begin and end dates of (proposed) Component: 12/1/72 - 11/30/76

Staff member in charge: Glen P. Nimnicht

Resume:

The developers plan to arrange for college recognition of the training in order to relate the competency units to the established system of education and certification of teachers and personnel and thus provide an effective system of career development. Preliminary discussions have been held with two educational institutions to arrange for testing of competency units and awarding of credit.

In 1973 and 1974, the Laboratory will have working agreements with at least two four-year colleges or universities. As the program develops, other institutions will be invited to join; in 1975 and 1976 at least ten institutions across the country will be involved in the program.

COMPONENT RESUME

Component code: R36F6H

Institution: Far West Laboratory for Educational Research and Development

Date prepared: March 27, 1972

Program title: A Training System for Staff of Early Childhood Education Programs

Component title: Developing a Plan for Dissemination and Utilization

Begin and end dates of (proposed) Component: 12/1/72 - 11/30/76

Staff member in charge: Glen P. Nimnicht

Resume:

In order to permit maximum utilization of the training, the developers will produce each competency unit as a self-contained unit. Each unit will be made available as soon as it is completed. Dissemination will be accomplished through the network of colleges and universities which are cooperating and offering credit, through publication of reports in professional journals and through the general dissemination of information by the Laboratory.

PROGRAM DESCRIPTION

A. THE PROBLEM

Introduction

The program has four major objectives; each one is related to a major problem that exists in early childhood education. The first objective is to develop an educational program that provides a career ladder for low-income persons who are currently involved or may become involved in some educational programs for children from ages three to nine. The second objective is to provide an efficient way of training large numbers of persons who will be needed in Head Start and Day Care programs. The third objective is to upgrade the quality of existing preschool programs by providing inservice training. The fourth objective is to develop a flexible training system that will allow a teacher in kindergarten through the third grade to choose from among a set of competencies those that will increase his effectiveness in working with a particular group of children.

Objective 1. Providing a Career Ladder for Low-Income Persons Who are Currently Involved or May Become Involved in Some Educational Programs for Children from Ages Three to Nine.

There are already large numbers of low-income persons working in Head Start, Day Care and Follow Through programs. These persons are receiving some training. Sometimes they receive some recognition for the training; sometimes they receive some kind of credit; but the recognition and/or credit do not necessarily fit into a career program that leads to a college degree with certification. Under the present circumstances, it takes a high school graduate who is working as an

assistant teacher four or five years to obtain an AA (two-year college degree). In the meantime there is no recognition of his or her increased competency in terms of additional compensation.

If we can provide a way for low-income persons to receive the training they need, they will find increasing opportunities in Head Start and Day Care programs. Grotberg (1971) reports Chambers' estimate that in 1980 providing day care with a desirable adult/child ratio for the preschool children of working mothers will require 1.32 million child care workers. Day Care programs are currently expanding at a rapid rate as the government and industry become increasingly aware of the need. And there is little doubt that the Federal government will pass legislation providing mass support to day care. The question is when the legislation will be passed and what form it will take, not whether it will be passed.

The extent of unemployment in areas to which day care programs will be particularly directed needs no documentation here. To increase employment opportunities, particularly for mothers, three conditions must be satisfied: (a) The employment must be near where they live and where their children are during the day. (b) The work schedule must allow mothers to insure the protection of the health and welfare of their children. (c) Opportunities must be provided for the mothers and others to acquire the skills and competencies that are necessary to fill the available jobs and entail some opportunity for advancement.

The location of a new Day Care program obviously will satisfy the first requirement, that employment be provided near where the mothers live. Staff schedules can be designed to meet the second requirement that mothers be able to

care for their own children, even if the children of the day care staff are not in the program. The third requirement identifies an unmet need. This need can be satisfied by the provision of opportunities for mothers and others to develop additional competencies necessary to perform effectively in the jobs available. In California, for example, a state preschool program employed in 1971, 708 persons who were welfare recipients; 458 of these persons became self-supporting because of competencies gained through parent training programs (Governor's Advisory Committee, 1971). The training need not be designed so that parents can fill all roles. It can be designed to qualify persons to fill roles at differing levels, the choice of level to depend on the interest of the individual and his or her demonstrated competence in earlier roles.

Objective 2. Providing an Efficient Way to Train Large Numbers of Persons Who Will be Needed in Day Care Programs.

This objective is obviously related to the first one but it goes beyond providing career opportunities for low-income persons. Because we have not had a history of large numbers of children receiving day care, training programs on the scale needed do not exist. In 1970, licensed day care centers and homes contained places for only 700,000 children, although more than 26 million children had mothers who worked full time or part time (Waldman,1971); U. S. Department of Labor data showed there were only 160,000 day care personnel in 1969 (Keister, 1970). Grotberg (1971) stated that staff training may well be the most critical area of Day Care requiring immediate research and development.

Directors, teachers,advisors, assistant teachers, cooks, nurses, parent coordinators and social service workers all need training. These staff requirements mean that there will be one adult for every five to seven children in a Day Care program and some form of training will be needed for every adult. The

training will have to be varied. For example, parents coming into the program will know the language of children in the program and they will understand the culture and life style of the families, but they will lack skills. The professional coming in may be trained to work with older children but he may require some retraining for work with younger children. He may also lack experience working with a particular ethnic or cultural group, and he may need to learn the language of the child.

Objective 3. Upgrading the Quality of Existing Preschool Programs by Providing Inservice Training.

Even if new day care programs were not to be initiated in the next five years, improved inservice training would be necessary to enable the present Head Start program, variations of it, and various other preschool programs to accommodate more children, more effectively. One of the lessons that has been learned from the Head Start experience is that it is not effective, or even possible, to operate training programs using only professionally trained teaching personnel (Circirelli, 1969). The Laboratory's experience in the development of training programs in the Head Start context (Nimnicht, 1971) has shown that all of the following are required:

1. Program Advisors to support and provide inservice training for teachers; approximately one Program Advisor for every 20 teachers and assistants in the program.
2. A teacher for every 15 to 20 children.
3. One or two teacher assistants for every teacher, depending on the number of children in a class.
4. Personnel to provide health service support.
5. Administrative support personnel.

While these roles can be identified separately, they overlap in terms of the competencies required.

It has been shown that persons with experience and backgrounds similar to those of the children and parents in the program can develop required new competencies. For example, the Laboratory's Responsive Model Follow Through Program was successful in training non-professional persons, including many parents, to become Learning Booth assistants (Rayder, 1972). (See also Gray and Klaus, 1968).

Over time these adults can become qualified to fill successively higher-level roles. With these added competencies, they can then be more effective than many who may meet certain formal requirements but do not share a common cultural background with the children and the community. The need, then, is to develop sequences of training that will: (a) enable those with useful experience and background to acquire and/or demonstrate the required competencies; (b) allow those who have demonstrated competencies at one level to expand their levels of competencies so that they may move upwards; (c) allow the programs to capitalize to the fullest on the acquired experience and competencies by insuring that each staff member is working at his optimum level of competency within the program; and (d) reduce personnel turnover by insuring that opportunities for training and advancement are provided for qualified persons who wish to continue in the program.

The problem of providing inservice training for Day Care workers is even more acute than it is in Head Start. Most of the Day Care programs in the country are custodial (Parker, 1970). If they are to become more than baby-sitting services, their staffs will have to be trained to provide an educational component in the program.

Objective 4. Providing a Flexible Training System that Will Allow Teachers in Kindergarten through the Third Grade to Choose from a Set of Competencies to Increase Their Effectiveness in Working with a Particular Group of Children.

Up to now the discussion of the objectives has focused primarily on pre-kindergarten programs, but the need for training of persons to fill new roles in the public schools is also obvious. Teacher assistant and parent coordinator, for example, are becoming accepted roles in schools, particularly in Follow Through programs. For example, in the school year 1970-71, the Laboratory's Responsive Model Follow Through Program included more teacher assistants (342) than teachers (290). Thus training is needed at the kindergarten and primary level as well as the preschool level to help persons perform competently in these roles. The introduction of these roles also increases the need for teachers to retrain themselves.

Furthermore, new ways of teaching children from low-income homes and ethnically different homes are proving to be effective with other children as well (Almy, 1970). The shift is towards more individualized instruction, more culturally specific curriculum, and more diversity--e.g., not one way to teach reading but three.

The teacher needs to be able to select the particular training he or she needs now--training in how to individualize instruction, for instance, or how to work with parents, or how to understand the cultural background and life style of different children. In some instances the teacher may need to learn a whole new system of teaching. In others, one or two competency units would serve the teacher's purpose.

Background on the Training System

To achieve the four objectives, we are proposing to develop a Flexible

Training System for all personnel in programs for young children. Before we can describe the training system we propose, however, it is necessary to provide the reader with some background information on the intellectual basis for that system. The remainder of this section will first describe the educational program for children upon which the training system is based. It will then describe the rationale for the training system, and finally, the training system itself.

The educational program for children is described in considerable detail on the next 16 pages. To aid the reader we have used different colored paper for this subsection so that the reader can skip it if he is already familiar with the program. In any case, it should be clear that the following discussion describes the program for children which forms a basis for the proposed training system; it is not a discussion of the training system.

The Educational Program for Children: The Basis for the Training System

The use of competency units implies a concept of what the behavior of the teacher ought to be if he took all the competency units. This implies some kind of model program with specific objectives, procedures and curriculum. The model program that will provide the basis for the training system is the Responsive Model Head Start and Follow Through program that has been under development for eight years, first at the New Nursery School in Greeley, Colorado, and since 1968 at the Laboratory as part of the Laboratory's Early Childhood Education program.

The Rationale for the Program

Formal education can and should start before a child is five or six. It does not, however, need to take place within a classroom. Formal education can happen in the home with one child or a small group of two to five children in a day care home with groups of fifteen or more children, in a Head Start or Day Care classroom, or in a public school. In contrast to informal education, formal education is a well-planned structured program of educational experiences that aid in the systematic development of a child's intellectual ability.

Underlying the Early Childhood Education program is the basic assumption that the family has the responsibility for the education of their children. The role of any educational institution is to aid the family in carrying out this responsibility.

A second assumption is that any formal educational program should provide a variety of alternatives to meet the needs of the parents and their children. Some parents will want or need day-long, year-round day care service for their children; others will need three to five hours in a classroom setting; still others will need assistance in working with their children at home.

A third assumption is that the educational program should be responsive to the learner's background, culture, and life style. For example, if a child is Mexican-American and speaks Spanish, the educational program should respond by using materials that are relevant to his background and reflect his cultural heritage. The language of instruction should include Spanish whether in a bilingual program or in a program in which English is treated as a second language.

These assumptions lead to one of the major goals of the program: to help maintain and develop a pluralistic society. Instead of the "melting pot" goal of blending divergent groups into a single homogeneous mass, the aim should be to develop a "tossed salad" of different cultures and life styles, enhancing their values and uniqueness so that they become complementary. This goal represents a profound change from traditional objectives. The reasoning behind it is this:

(1) Minority groups have resisted the efforts of the majority group to assimilate them. They have also resisted the educational system that tries to carry this out. This resistance, of course, limits the progress of minority children within the system and sets up conflicts within the children between the values of the family and their educational system. Voices in the Black community

allege that the schools are irrelevant (Solomon, 1968; Hamilton, 1968; Clark, 1965; Spencer, 1968).

(2) In some respects a pluralistic society is probably less efficient than a more homogeneous society. However, because different points of view provide a wider variety of alternatives to choose from in looking for problem solutions, a pluralistic society is probably much richer and more productive in the long run. The logic is the same as that applied to inter-disciplinary studies. Diversity can enrich rather than impoverish.

The goal of a pluralistic society has two implications for an educational program:

(1) the public schools will have to take into account what the children learn before they start school; and

(2) they will have to be more responsive to individual children and their parents.

The basic problem with the schools at the present is that they are designed to serve students who hold the same values as the teachers--white, middle-class children or those who emulate white, middle-class children. The schools respond to these children and nurture their development. This is evident in both procedures and content.

The procedures are built around the concept that all children at a given age are ready to learn the same thing (with some consideration given to inherited ability) and are motivated by the same factors. That is, such children will avoid failure, low marks, or retention in grade, and will work for success, high marks and praise from the teacher. Following this concept, most instruction takes place in front of groups of twenty-five or more students.

The content is designed to be generally interesting to the average student and the major motivation is threat of failure or promise of success.

Head Start and Follow Through programs recognize that the current school system fails to meet the needs of culturally and ethnically different children. Within these national programs, efforts have been encouraged that either help a child to respond to the existing system or change the system to respond to the existing child. Nevertheless, there are too few examples of schools making concessions to children who are culturally different or who have different life styles. For example, some programs recognize that, since English is a second language for Spanish-speaking children, it should be taught from that point of view. But few experimental programs are concerned with developing bilingualism, and fewer still have any content that is relevant to the child's background.[1] Perhaps the prime reason for this is that neither the parents nor the children themselves have had an effective voice in shaping their education.

The decisions about where to begin such a program and where to end it are arbitrary but necessary. Eventually such a program could affect the entire educational system, but it is obvious that some practical limits must be set to undertake a program of this scope. The age range has been set from ages of infancy to nine years. Currently the program encompasses the Head Start and Follow Through programs serving children from low-income homes and culturally and ethnically different children. But the program will be designed to serve all children. The Head Start and Follow Through programs were selected because their needs are the greatest and because improving educational opportunities for these children has been given a national priority (Fitzgibbon, 1970).

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[1] See, for example, "It Works--Programs in Preschool Education", 1970, a series of pamphlets published by the U. S. Department of Health, Education, and Welfare, Washington, D. C.

The Major Objectives of the Program

The long range goal of the program is to develop a model responsive educational system that will serve at least 90% of the children from infancy to at least age nine. The major objectives of the system will be to help children develop a healthy self-concept as it relates to learning in the school and the home, and to develop their intellectual ability. These two objectives are inter-related and cannot be treated as though they were independent of each other.

A child has a healthy self-concept in relationship to learning and school, if:

1. he likes himself and his people;
2. he believes that what he thinks, says and does makes a difference;
3. he believes that he can be successful in school;
4. he believes that he can solve a variety of problems;
5. he has a realistic estimate of his own abilities and limitations;
6. he expresses feelings of pleasure and enjoyment.

If children have healthy self-concepts in relationship to learning and school, when compared with other children from a similar background, they will:

1. make better estimates of their ability to perform a given task;
2. make realistic statements about themselves and their racial, cultural, or ethnic group. Statements will be both positive and negative, but more positive than negative;
3. be more willing to take reasonable risks of failure when confronted with a problem they can probably solve;
4. after answering a question or offering a solution for a problem, make more realistic statements about the probability of being right or wrong;

5. express feelings or opinions more frequently, with fewer non-commital responses, fewer stereotyped responses, and a greater variety of responses to such questions as, "How do you feel about _____?" or "What do you think about _____?";
6. express themselves more freely in writing, painting or picture-drawing;
7. learn from errors and corrections instead of feeling frustrated, put down or rejected;
8. be able to express in verbal and non-verbal ways feelings of joy, happiness, fear and anger;
9. be able to use failure in a productive way;
10. take credit for accomplishments and failures;
11. be able to maximize the use of resources to solve problems;
12. be able to interact with other children and adults, i.e., be neither aggressive nor submissive all the time in relationships with others;
13. be able to work within limitations and make the most of a limited situation.

If the program is successful in producing a better environment to help children develop or maintain a healthy self-concept, children in the program will:

1. attend school more frequently;
2. be tardy less frequently;
3. say more positive things about the school, the teacher, and the things they are learning.

A child is developing his intellectual ability if he can solve a variety of problems, roughly classified as non-interactional, interactional, and affective. In a non-interactional, physical, or one-person problem, an individual

manipulates his physical environment, but is not manipulated by it in the same way. The results of a physical problem are highly predictable. Solving puzzles is a good example of a non-interactional problem. In fact, intelligence tests are primarily a test of an individual's ability to solve puzzles. The present school curriculum deals mainly with this kind of problem-solving.

An interactional problem involves two or more people (or machines) and requires a person to think, "If I do this, what is he likely to do?" The individual is being manipulated at the same time he is manipulating. Games like bridge, poker, and chess are good examples; so is hide-and-seek. The solutions to interactional problems are not as predictable as the solutions to non-interactional problems.

Finally, it is possible to consider these two kinds of problems without considering emotional overtones, but emotion is usually involved to some degree. When the emotional aspects of the problem become the dominant consideration, the problem becomes affective. And, of course, the more affective it becomes, the more difficult it is to cope with the problem. An educational system must help children learn to cope with all three kinds of problems; for, in many instances, the learner cannot solve non-interactional or interactional problems until he has solved some affective problems.

To learn to solve a variety of non-interactional and interactional problems, the learner must develop:

(1) his senses and perceptions because the senses are the source of data for the thought process;

(2) his language ability because language is a tool of the thought process;

(3) his concept-formation ability because he needs to be able to deal with abstractions and to classify information to organize thought.

We can specify some intermediate aims that are related to problem-solving ability and are necessary prerequisites to developing a high order of problem-solving ability. But, the attainment of these ends does not mean that we have achieved our major objective. These aims are those that are currently measured by the typical school achievement tests; thus, we can state some intermediate criteria in terms of achievement test scores.

We will judge our program to have achieved a minimum level of success on some of the intermediate aims if the children involved in the program for three or more years have achieved scores on tests of school-related skills at least six months higher than would be predicted for the present programs.

The limitation of this intermediate criterion is that it is restricted to the measures of skills related to reading, arithmetic and science. Since this is not our major criterion for success, and since we believe that a wide variation can exist in content, the specific tests to be used and the content to be measured will vary from school district to district according to current practices.

Another intermediate criterion will be the child's knowledge and understanding of his cultural background. Since the program serves a diversity of children, it is obvious that measures of success on this criterion will have to be developed for different children.

The major objective of developing a child's intellectual abilities can be defined as developing his ability to learn how to learn. This involves giving the child the competence to sense and solve problems as well as the confidence to tackle them. When compared with other children from similar backgrounds, children who have been in the program two or three years will be better able to:

1. recognize, complete, extend, and discover patterns in one direction;
2. recognize, complete, extend, and discover patterns in two directions (matrix games);
3. recognize, extend and discover rules from examples (inductive reasoning);
4. persevere, concentrate and succeed on problems involving the breaking of "set";
5. adapt to games involving rule changes;
6. eliminate what is known to determine what is unknown;
7. use feedback productively to modify actions;
8. solve verbal and mathematical puzzles;
9. seek a solution to one-person problems without assistance;
10. recognize that a problem cannot be solved with the information at hand;
11. anticipate the probable response of the other player in interactional games;
12. anticipate the probable response of others to alternative actions of the individual in some social situations;
13. cope with their own emotions--for example, exhibit a healthy outlet for anger;
14. cope with emotions of other individuals.

Note again that these statements are not intended as a complete definition of problem-solving ability, but only as indicators. The task that remains to be done both in measuring a child's self-concept and in measuring his intellectual ability is to devise test situations or observational situations that will indicate

how an individual compares to others on each item we have mentioned. Also, note that there is an obvious overlap between problem-solving that involves affective behavior and the measures of a healthy self-concept. This reinforces our notion that the two major objectives are related and we can only be successful if we achieve both objectives.

Procedures

To achieve the above objectives, the model program is based upon the idea of an environment that is designed to respond to the learner and in which all learning activities are autotelic.

A learning environment that responds to the learner satisfies the following conditions:

a. it permits the learner to explore freely;

b. it informs the learner immediately about the consequences of his actions;

c. it is self-pacing, with events occurring at a rate determined by the learner;

d. it permits the learner to make full use of his capacity for discovering relations of various kinds;

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

The activities within the environment are autotelic; that is, the activities are self-rewarding and do not depend upon rewards or punishments that are unrelated to the activity. But not all self-rewarding activities are autotelic. To be autotelic, an activity must help the learner develop a skill, learn a concept, or develop an attitude that is useful in some other activity. Autotelic activities

are intentionally designed to reduce the rewards for success or the punishment for failure to tolerable limits for the learner and society, so that the learner can master some skill that is useful in life, but one which often cannot be learned through direct experience since the cost of failure is too great to tolerate.

In many of our autotelic activities, the only reward is the successful completion of the task; other activities are games in which the reward is winning the game. The child knows if he did not complete the task or he did not win, but he is not punished by not receiving a good grade or a token. Furthermore, if he cannot complete the task, he can leave it, or if he does not win, he can stop playing or play with someone else. In any event, the child is protected from an overly anxious adult who might pressure him by withholding desirable extrinsic rewards or by threats of punishments. We believe that any educational program for young children must provide a way to avoid painful experiences that can affect future learning. The use of autotelic activities provides this protection.

Application of the Procedures to the Classroom

As the children enter the classroom in the morning, they are free to choose from a variety of activities such as painting, working puzzles, playing with manipulative toys, looking at books, listening to records or tapes, using the Language Master, and building with blocks. They can stay with an activity as long as they like or they can move on to something else whenever and as often as they like. As the day progresses, small groups play games (learning episodes) with the teacher or assistants and others ask to be read to. During the day, the teacher and assistants read to the children, play games with them and respond to the spontaneous activities which build the experience that precedes instruction

in some skill or concept. The teacher and assistants respond to the children rather than having the children respond to them. Adult-initiated conversation is limited, but child-initiated conversation is encouraged.

About fifteen or twenty minutes a day are devoted to large group activities such as singing, listening to a story, show and tell, or participating in a planned lesson. A child does not have to take part in large group activities if he does not want to, but he cannot continue in any activity that disturbs the group.

Once each day in kindergarten and first grade classes with Learning Booths a booth attendant asks a child if he would like to play with the typewriter. If the child says "yes," the attendant takes him to a booth equipped with an electric typewriter. The child begins by simply playing with the typewriter and the attendant tells him what he is doing. Whatever keys he strikes--"x," "a," "y," "comma," "space" or "return"--the attendant names. The child moves from this first free exploration phase through matching and discrimination to production of his own words and stories. At each phase, his discovery of the rules of the new phase (game) is stressed.

In the first, second, and third grade programs being developed, the same general procedures are followed; but the activities change and there are more small group activities and perhaps two or more large group activities a day. The children still have large blocks of time for individual activities. The block corner and dress-up area give way to more educational games related to math and science. There are some small reading or arithmetic groups or reading and math are more often taught on an individual basis. The primary grade children are still free to choose their own activities and to opt out of large or small group work.

The Intellectual, Psychological and Empirical Bases for the Program

The major influences in shaping the educational process, the curriculum and the objectives came from Omar Khayyam Moore, Alan Ross Anderson, Martin Deutsch and his staff at the Institute for Developmental Studies in New York and Maria Montessori. Moore and Anderson were the original source of the principles that have guided the development of the classroom process (Anderson and Moore, 1960, and Moore, 1963). The initial application of those principles to a total classroom occurred at the New Nursery School in 1965. Since then Moore has expanded upon them for use in a classroom (Moore and Anderson, 1967, 1968).

We have expanded on the concept of responsiveness to include responding to parents, community, and ethnic differences, which goes beyond the classroom.

The major contribution of Martin Deutsch and his associates to the initial work was his statement of objectives which we adopted and have since modified, and some of the specific classroom techniques that were developed at the Institute. (Deutsch, 1966; Deutsch and Deutsch, 1969; Nimnicht and Meier, 1966.)

The major contributions of the work of Maria Montessori were her notions of how the classroom should be organized, the role of the teacher and the use of materials. The primary difference has been that in a Responsive classroom, we have used the materials differently, allowing children to use them in a variety of ways. (Montessori, 1912.)

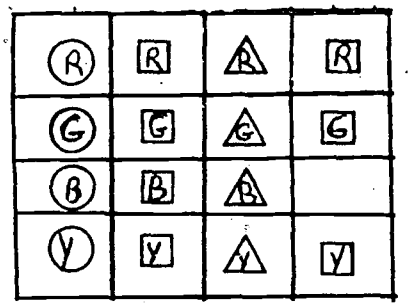
Because the basic notions have come from the social-psychological theories of Moore and Anderson rather than a specific learning theory, the approach has often been called eclectic by learning theorists; from their point of view their analysis is correct. The development of the program has been influenced by writings of Piaget, J. McVicker Hunt and Jerome Bruner. (Piaget, 1962; Hunt, 1961; Bruner, 1959.)

Although our program is based more heavily upon the ideas of developmental theorists, we also find useful the work of B. F. Skinner, Lloyd Homme, and other behaviorists who are interested in the basic notions of operant conditioning, behavioral objectives, and reinforcement of learning. (Homme, 1963, 1964a, 1964b.) To try to define objectives in clear behavioral terms is useful, but we do not believe that every objective can be defined in behavior that can be immediately observed. To do so unnecessarily restricts our real objectives and results in superficial statements which do not reflect our real objectives. We also find it useful to think in terms of reinforcement of learning and feedback to the learner. We are using intrinsic reinforcers in autotelic activities instead of extrinsic reinforcers, but the reinforcers are present. The notion that a wide variety of autotelic activities is necessary because no one activity is rewarding to all children is consistent with behaviorists' notion that a varied reward system is necessary to reinforce learning. They use tokens as reinforcers while we use a variety of learning activities.

While we develop learning sequences, we do not assume that every child must follow that sequence. In many instances, we do not claim to know how the learning of a particular behavior contributes to the future learning ability or achievement of a child. This has sometimes been described as a "sandpile theory of learning"; that is, we know that it takes a tremendous number of grains of sand to support more sand. But, we are not at all certain which grain of sand is necessary to support the next one. And, as the analogy implies, we are not certain that any particular grain is necessary--others could be substituted and still support the pile.

Two examples will illustrate the notion of sequencing and the "sandpile theory." In beginning a Head Start classroom, we advise the teacher to help the children learn a variety of concepts including color, size and shape. After the child has considerable experience with colors, shapes and sizes, we start combining them into more complex concepts such as the largest circle or the green triangle, and eventually the smallest yellow square or the largest blue circle. We assume that the child can learn to deal with three attributes by dealing first with one attribute at a time, then two; but he does not necessarily have to follow this sequence of learning.

Another series of problems are posed by matrix games. In one such game, all of the shapes in the first row are red, in the second row green, third row blue, and the last row yellow. All shapes in the first column are circles, in the second squares, in the third triangles, and in the fourth rectangles.



One of the cells in the matrix is covered and the child is asked what shape is covered. To solve the problem, he must figure out the shape by looking at the column and its color by looking at the row. This is a fairly difficult problem for many four- or five-year-old children, yet it seems to be worth presenting. Except for helping a child learn to solve other matrix problems, however, it is difficult to say how it contributes to his future learning. We assume that it contributes to general problem-solving ability, but we do not assume that this or a similar experience is crucial to the future learning ability of the child.

The notion of the "sandpile theory" has many practical applications. First, there is no sacred content that must be mastered at or by a given time. The child can opt out and not learn to count to ten in kindergarten--he can learn to count later. The emphasis is on learning how to learn--on the process rather than the specific content to be learned. We select content on the basis of four criteria:

1. Can we devise a way to help the child learn the concept without distorting its meaning?
2. Is the concept or skill of immediate value to the child?
3. Will the concept contribute to the child's ability to learn more complex concepts?
4. Does a concept fulfill expectations that teachers have at the next grade level?

A skill or concept does not have to meet all of the criteria, but the criteria help to establish priorities or emphases that are placed on content. Nevertheless, we insist that all children not be expected to learn a set of skills or concepts at any given time.

The program has been extensively evaluated in two ways: 1) a formative evaluation of the development of specific materials and techniques to teach specific skills, concepts or problem-solving strategies; and 2) a general evaluation of the total program. Both forms of evaluation have been reported in a series of reports on the New Nursery School (Nimnicht, Meier, 1966; Nimnicht, Meier, McAfee, 1967; Nimnicht, FitzGibbon, McAfee, undated; Kelly et al., 1971) and in a series of reports by the Laboratory (Abbey, Nimnicht, 1969; Nimnicht, Rayder, Johnson, 1969; Rayder, FitzGibbon, Alward, 1970; Nimnicht, Rayder, Tuck, 1970; Rayder, Alward, Nimnicht, 1970; Nimnicht, Rayder, Alward, 1970; Rayder, 1970; Rayder, Ng, Alward, 1971; Nimnicht et al., 1971; Rayder et al., 1972; Ng, Rhodes, 1972).

The evaluations of the Responsive Model Head Start and Follow Through programs have consistently shown that the children in the program developed cognitive skills at a more rapid rate than children in various control groups. They have also indicated, from what evidence we have been able to obtain, that the children soon developed a more realistic self-concept in relation to school and learning. For example, their attendance records are better than those of comparison groups. A review of the available literature has been completed by FitzGibbon and Nimnicht (1972) comparing the results in this program with other model programs, and this program compares very favorably. Since this report has not been published as yet a draft is included in Appendix A.

Since the evaluations have been favorable even though the program is still in a developmental stage and the training of teachers to implement the program is still being developed, we think we can proceed with considerable confidence in using this program as a basis for developing a Flexible Training System.

The Rationale for Proposing this Particular Approach to Developing a Training System in Early Childhood Education

The Far West Laboratory is in the fifth year of developing and testing an experimental training program for Head Start teachers and assistants, and in the third year of a similar program for Follow Through teachers and assistants in kindergarten through the third grade. The first three years of the Head Start program are summarized in Appendix B. We believe that the training program for Head Start teachers and assistants is effective and efficient. The approach is for the Laboratory staff to train local Program Advisors who in turn train teachers and assistants.

The Laboratory staff conducts a two-week workshop for the Program Advisors prior to the beginning of the school year. The Program Advisors return to their

centers and each conducts a four-day workshop for teachers and assistants before the classes open for children. Each week the Program Advisors conduct an inservice workshop for the teachers and assistants; each session is designed to introduce content, materials, and procedures to be used the following week in the classrooms. The basic procedure for the Program Advisors is to introduce the new content or the new skill by conducting a discussion, or by illustrating the skill with another teacher, modeling the behavior (videotape is one method employed), or by demonstrating the use of the materials. The teachers and assistants then practice in their classrooms the following week, report back on the process, and either move on or repeat the operation.

The materials for the teachers and assistants have been organized into three twelve-week cycles for one school year. Each cycle contains eight inservice units, which are designed for approximately one week. Thus, the twelve weeks provide time for recycling the course when necessary or for adding other activities dealing with the non-classroom aspects of a Head Start program.

In addition to conducting the workshops, the Program Advisors spend at least three hours every three weeks in each teacher's classroom to observe, demonstrate, or join the teaching staff in working with the children. Finally, teachers are asked to videotape themselves using the learning episodes; on the playback the Program Advisors help them to analyze their teaching methods.

The Program Advisors return to the Laboratory for at least three additional weeks of training during the school year, and they receive some on-site training when the Laboratory's staff visits each center to observe and evaluate the effectiveness of the program.

With this approach we can train fifty percent of the teachers to the point where we would say that they are good examples of our model program, and we can

make substantial changes in the behavior of another thirty percent during the course of the first year. At this time we are not sure of the effects of a second year of training but the results seem promising. Even though we believe that the training program is as efficient and effective as any other program in the country, it still has many weaknesses:

1. As currently designed, it depends upon a certain degree of sequencing of the learning experience for the teachers and assistants. The sequencing assumes that all of the teachers and assistants need the same kind of learning experience at the same time. This assumption, of course, is not true.
2. The training program does not distinguish between the teachers and the assistants. It is designed mainly for the teachers. The assistants appear to be learning from the program but probably they would progress faster if a special program was designed for them. In a survey conducted in 1970-71, the Responsive Model Follow Through teachers and teacher assistants were asked to evaluate the effectiveness of the inservice workshops. Teacher assistants indicated that they would like to have some workshops that are geared especially to their role and function in the classroom. (Ng and Rhodes, 1972.)
3. The teachers and assistants receive college credit for this inservice course, but it fits in a haphazard way into a career development program.
4. The training the assistants receive is usually not recognized in a salary schedule. They receive the same pay with or without the training. Forty-one percent of the 288 assistants who participated in our survey indicated that they were dissatisfied with their salary. (Ng and Rhodes, 1972.)

5. The program is designed to train Program Advisors who in turn train teachers and assistants, so it provides training for three groups who are primarily concerned with classroom activities. As our experimental program continued, however, it became increasingly apparent that other Head Start personnel should be involved--the parent coordinators, welfare assistants, nurses and health aides and Program Directors.

Conversations with others who are involved in training Head Start teachers and assistants have indicated that many of the same problems are common to all programs. There are some specialized programs for training teacher assistants but they often create a problem because the teacher has not received the same training and the assistant who has received special training is not allowed to put the training into practice. Other programs specialize in training only teachers or potential leaders, but it is difficult for these people to put the training into practice without considerable support because the rest of the staff has not been involved.

A third problem that seems to be national in scope is that career development programs are tied to college course work and credit hours. Under these circumstances, a teacher assistant with a family who starts with a high school degree needs four or five years to obtain a two-year degree. In the meantime that person has acquired four or five years of classroom experience. If career development programs are to be effective, some method of reducing the time that is involved must be found, not only for the sake of the individuals who are involved but to provide teachers with expanding preschool and day care programs. Numerous writers in the field of education have called for more flexible, performance-based criteria for credentialling. (For example, see Allen, 1969; Cogan, 1968; Popham, 1971; Weber, 1969.)

A careful analysis of some of the problems suggest the conditions that an effective training program should satisfy, which are as follows:

1. It should provide training for the entire staff that fits into a career development program.
2. It should provide for the individual differences among the trainees at the outset of the training and allow them to progress at different rates and in different ways.
3. It should provide a basis for awarding college credit that is not dependent solely upon college course work.
4. It should provide for a variety of alternatives for employment so that the individual is not dependent upon one program.
5. It should provide a way for increased competency to be reflected in increased compensation.
6. It should provide for differences in training to reflect differences in communities and the children served.
7. It should be inservice so that the individual does not have to leave home for long periods of time or go without an income during training.
8. It should provide a variety of competencies in a short period of time.

A goal needs to be designed to satisfy these conditions.

If the program is to accommodate individual differences among the trainees at the outset of the training and allow trainees to progress at different rates and in different ways, it must provide some way to determine what skills the individuals have at the outset and allow for individual training. This requirement suggests that instead of setting out a sequence of training, the program should offer training in terms of clusters of competencies or a matrix of competencies

that would allow the learners to enter at any point. If the competencies were carefully defined, the learner could determine where to begin by assessing his ability at the outset and choosing those competencies that would be the most beneficial.

To provide a basis for awarding college credit that is not dependent solely upon college course work, the cluster of competencies would have to be defined clearly enough to be converted into language that colleges and universities could deal with. For example, it would be necessary to say that for a person to learn a set of competencies would require a certain number of hours of training (such as 15 hours), and a certain number of additional hours of practice (such as 30 hours). (This amount of training would be comparable to 1 1/2 hours of credit on a quarter system.) Furthermore, it would be necessary to specify the behavior or understanding that would result from the training and the behavior or understanding would have to be capable of being assessed. Under these conditions, college credit could be awarded. The next step would be to award credit for a defined competency for which standards had been set to a person who had that competency at the outset of the training. For example, if the desirable competency were the ability of the teacher or assistant to understand the language of the child (for example, Spanish), an assistant teacher who came to work understanding that language would deserve the credit. By using this system and by relating a large portion of the training to the classroom or center, the program could reduce the amount of time required to obtain a degree without reducing quality.

If it were possible to show that a trainee, such as a teacher assistant, has completed 50% of the competencies required for a position, then it would also be possible to reflect that level of competence in the compensation that the person receives.

The Training System

In accordance with the rationale described above, the proposed training system will offer training in the form of competency units organized into groups or matrices of competency units for each staff role. Trainees can choose from the appropriate matrix the competency units in which training would be most beneficial.

The Competency Units

Competency units will vary in difficulty and in the amount of time required to obtain the competencies that are included in the unit; the teaching methods will also vary according to the competencies that are included. All units, however, will contain the following: (a) a clear statement of objectives, (b) materials and procedures necessary to achieve the objectives of the unit, (c) an estimate of the time required for an interested adult to acquire the competency, and (d) a definition of the level of competence achieved at the conclusion of the training as determined by observable kinds of behavior. In addition, the amount of time required for attainment of a given level of competence will be related to equivalent college course credit at one or more institutions of higher education. A more detailed statement in the characteristics of a competency unit and an outline as an example are given in Appendix C.

The competencies can be tested at various levels of understanding and behavior:

(1) The knowledge of something as expressed in verbal or written test of the ability to identify a behavior when observing in a classroom or viewing a videotape.

(2) The ability to produce the behavior.

(3) The ability to produce the behavior and generalize from one behavior to another.

(4) The ability to produce the behavior, generalize from it, and teach the behavior to some one else.

Some of the competencies can be assessed at all four levels while others will be assessed only at Level 1 or 2. The level desired by different staff members will also vary. Table 1 on pages 30 to 32 lists the competency units and shows the relationship of competency units to roles and the desired level of each competency for each role.

Table 1 indicates, for example, that 20 basic competencies are designated for the teacher assistant, and the assistant needs most of these at Level 2, production of the behavior. The teacher needs many of these same competencies at Level 3. In addition to the 20 basic competencies, the teacher will need certain others, such as Competency #21, the ability to organize the classroom and materials and Competency #23, the ability to evaluate the progress of the children, at the level of production.

Since the Program Advisor is the person who works with ten teachers and assistants at a time to provide the inservice training, he needs to be able to demonstrate the competencies required of the teacher. Thus most of the competencies for the Program Advisor are listed at Level #4, which involves the ability to teach the behavior to someone else. The Program Advisor also needs at the level of production certain additional competencies, such as Competency #33, the ability to conduct teacher training workshops, and Competency #31, the ability to observe and determine when assistants and teachers have achieved certain competencies. Obviously, all of these competencies are complex and they need to be defined in operational or behavioral terms whenever possible; but they illustrate the kind of competency that would be required of the Program Advisor.

Table 1

RELATION OF COMPETENCY UNITS, ROLES AND REQUIRED LEVELS OF COMPETENCY FOR ADULTS FILLING DIFFERENT ROLES WORKING WITH CHILDREN

Competency Unit	Level of Competency for Each Role: Teacher Assistant	Teacher	Program Advisor	Program Director	Parent Coordinator	Social Services Worker
1. Understand total program*	1	1	1	1	1	1
2. Model language for children	2	3	4	2	-	-
3. Develop child's language skills*	2	3	4	1	-	-
4. Develop child's relational concepts**	2	3	4	1	-	-
5. Develop child's category concepts**	2	3	4	1	-	-
6. Develop child's social concepts**	2	3	4	1	-	-

The numbers in the body of the table represent the following levels of competence:

1. Verbal recall: The knowledge of something as expressed in verbal or written form, or the ability to identify a behavior when seen in a classroom or on videotape recording.

2. Produce behavior: The ability of the adult to produce the desired behavior.

3. Generalize behavior: The ability to recognize that the adult has himself produced the desired behavior, or the ability to generalize from one behavior to another.

4. Teach behavior: The ability to recognize that the adult himself has produced the desired behavior, can generalize from it, and can teach the behavior to someone else.

* An asterisk beside a competency unit indicates that the competency unit will contain different content for adults working with the three different age groups (ages 6-9, 3-5, and 0-2) but the procedure will remain the same.

** A double asterisk indicates there will be considerable change in the competency unit for the three different age groups.

No asterisk indicates that there will be no change from one age group to another in the competency unit.

Competency Unit	Level of Competency for Each Role					
	Teacher Assistant	Teacher	Program Advisor	Program Director	Parent Coordinator	Social Servies Worker
7. Develop child's problem-solving ability*	2	3	4	1	-	-
8. Use games and other materials*	2	3	4	1	-	-
9. Test young children*	2	3	4	1	-	-
10. Use the child's play for learning*	2	3	4	1	-	-
11. Understand child's language	2	2	4	2	2	2
12. Understand child's background	1	1	1	1	1	1
13. Help child develop healthy self-concept	2	2	4	2	1	1
14. Control children's behavior in a group	2	3	4	1	-	-
15. Help child develop self-control	2	3	4	1	-	-
16. Work effectivelv with other adults	2	3	4	4	-	-
17. Work effectively with parents	2	3	4	4	2	3
18. Conduct Parent/Child Toy Library *	2	1	4	1	2	1
19. Use Learning Booth	2	1	4	1	-	-
20. Undefined						
21. Organize classroom and materials*	-	2	4	1	-	-
22. Plan for day, week, and year*	-	2	4	1	-	-
23. Evaluate progress of children*	-	2	4	1	-	-
24. Evaluate textbooks for cultural relevance**	-	2	4	2	-	-
25. Explain program to parents*	-	2	4	2	-	-
26. Understand demeaning behavior with racial overtones and eliminate	-	2	4	2	-	-

Competency Unit	Level of Competency for Each Role: Teacher Assistant	Teacher	Program Advisor	Program Director	Parent Coordinator	Social Services Worker
27. Undefined						
28. Undefined						
29. Make classroom observations	-	-	2	1	-	-
30. Critique video-tapes of classroom	-	-	2	1	-	-
31. Determine level of competency	-	-	2	1	-	-
32. Make demonstrations*	-	-	2	1	-	-
33. Conduct workshops*	-	-	2	1	-	-
34. Involve parents*	-	-	2	1	-	-
35. Undefined						
36. Undefined						
37. Set goals*	-	-	-	2	-	-
38. Analyze problems*	-	-	-	2	-	-
39. Derive objectives*	-	-	-	2	-	-
40. Design instructional progr m*	-	-	-	2	-	-
41. Plan program implementation*	-	-	-	2	-	-
42. Plan program evaluation*	-	-	-	2	-	-
43. Undefined						
44. Undefined						

Note: The undefined competencies (20, 27, 28, 35, 36, 43, 44) are listed in this table as an indication that a number of additional competencies will be defined as work progresses. Eventually, additional competencies will also be defined for Parent Coordinators and Social Services Workers.

The need for a common core of competencies for assistants, teachers, and Program Advisors is clear. For the next position--the Program Director--the need is not so clear. It certainly would be desirable for the directors to have all the competencies of a Program Advisor, but performing these competencies is not essential to the director's role. What does seem essential is a knowledge of the competencies that would enable a director to understand and explain the program. Thus, most of the competencies between Competency #1 and Competency #36 are listed at Level 1, verbal recall, for the Program Director. Certain additional competencies, such as Competency #41, the ability to plan program implementation, are listed at the level of production for the Program Director.

Schematic Model of the Training System

Chart I on page 35 is a schematic model of the completed training system. Although the chart is organized in three series of matrices, it is schematic only in terms of the number of matrices. It does not mean that we believe such a systematic pattern will emerge. However, the matrices help express the relationships that will exist in the system.

The chart is organized in three series of matrices. The series at the top (A) addresses training for personnel working with children from ages six through nine; the middle series (B) is for children from three through five, and the bottom series (C) is for ages zero through two. (Although it is included in the chart, the training for personnel working with children from ages zero through [illegible] is not covered in these program plans.)

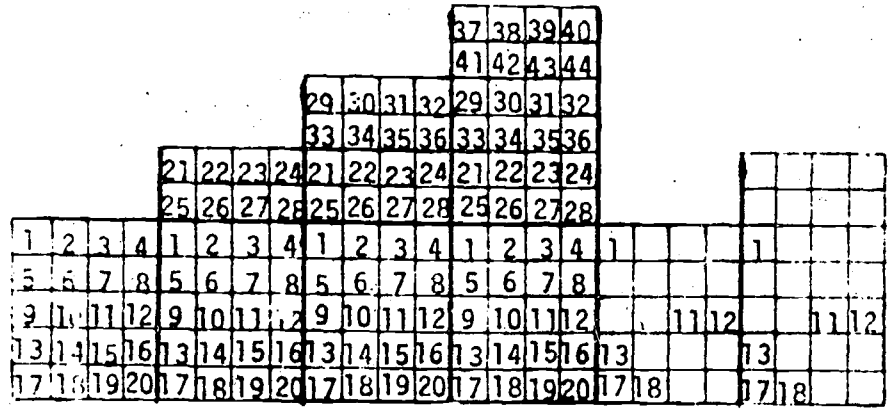
The vertical columns show the matrix of competencies required for each role. For example, the first matrix in each series (A-1, B-1, and C-1) lists [illegible] needs to have, and the second matrix in each series, A-2, B-2, and C-2, lists the competencies that a teacher [illegible]

CHART I

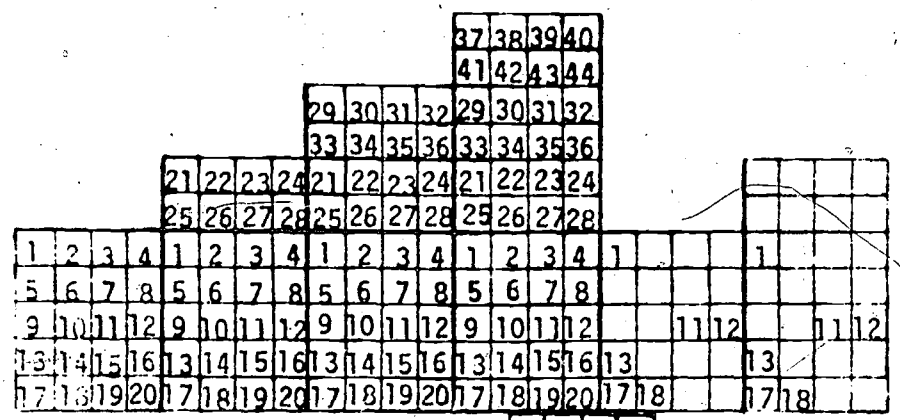
SCHEMATIC MODEL OF THE COMPLETED TRAINING SYSTEM*

1 Teacher Assistant	2 Teacher	3 Program Advisor	4 Program Director	5 Parent Coordinator	6 Social Services Worker

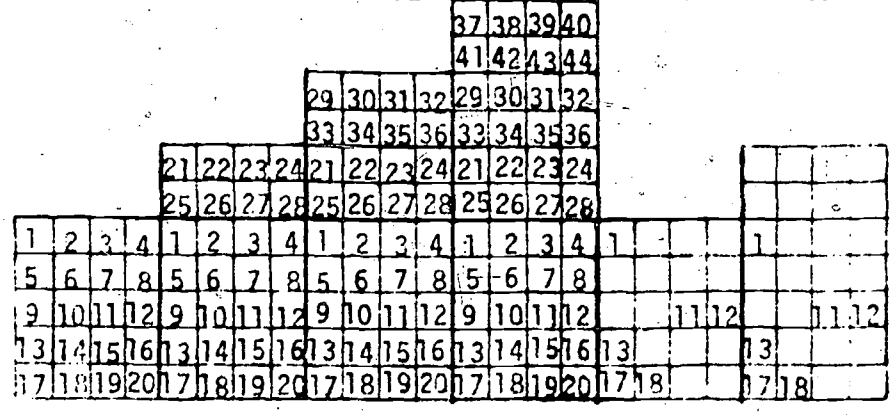
AGES 6 - 9 A



AGES 3 - 5 B



AGES 0 - 2 C



*The numbers within the body of the chart refer to competency units. Table 1 on pp. 31 to 33 lists the number and title of each competency unit. As Table 1 indicates, some competency units change in content and/or procedures for personnel working with different age groups.

The numbers shown within each matrix refer to the competency units listed in Table 1. For example, the number 1, which appears in the matrix of every staff role, refers to Competency #1, an understanding of the total program.

The competencies in the three series of matrices will interact with each other and fit into a training system in a variety of ways:

(1) Some competencies will apply to the training of every person in every position, such as Competency #1, an understanding of the total program, and Competency #17, working effectively with other adults.

(2) As indicated in Table 1, all of the competencies in the A-1, B-1, and C-1 matrices for teacher assistants will apply to the training of the teachers and Program Advisors. Certainly all of these competencies are desirable for the Program Director, but an understanding of them instead of the ability to perform them is all that will be required of the director.

(3) Some competencies will apply to all assistants, teachers and Program Advisors regardless of the age of the children. These include, for example, Competency #11, understanding the child's language, and Competency #2, modeling language for young children.

Others will involve the same process but the content will vary for each age group (i.e., for series A, B, and C in Chart I). Examples include Competency #8, using games and toys as a learning experience for young children, and Competency #9, testing young children.

Still others will involve considerable change from one age group to another, such Competency #4, developing relational concepts, and Competency #24, evaluating instructional materials for cultural relevance.

Table 1 indicates for each competency whether it will involve no change, change in content but not in procedure, or considerable change, for the different age groups.

(4) Some competencies will apply to staff members across programs but the content will vary depending upon the geographic location of the program. Examples include Competency #11, understanding the child's language, and Competency #12, understanding and appreciating a child's cultural background.

In these examples the training unit to develop the necessary competency can specify a procedure or process to follow, but the content will be added at the local center.

The chart enables an individual to see what is required to move from one position to another--for example, to move from parent coordinator to teacher assistant, or from teacher assistant with older children to teacher assistant in a day care center or day care home. The chart also shows some of the requirements for becoming a teacher, but careful note should be taken that it does not show all that is required because colleges and universities have academic requirements for degrees and certification as similar requirements. Thus, the training system is not a complete educational program; additional courses and studies will be required outside the system.

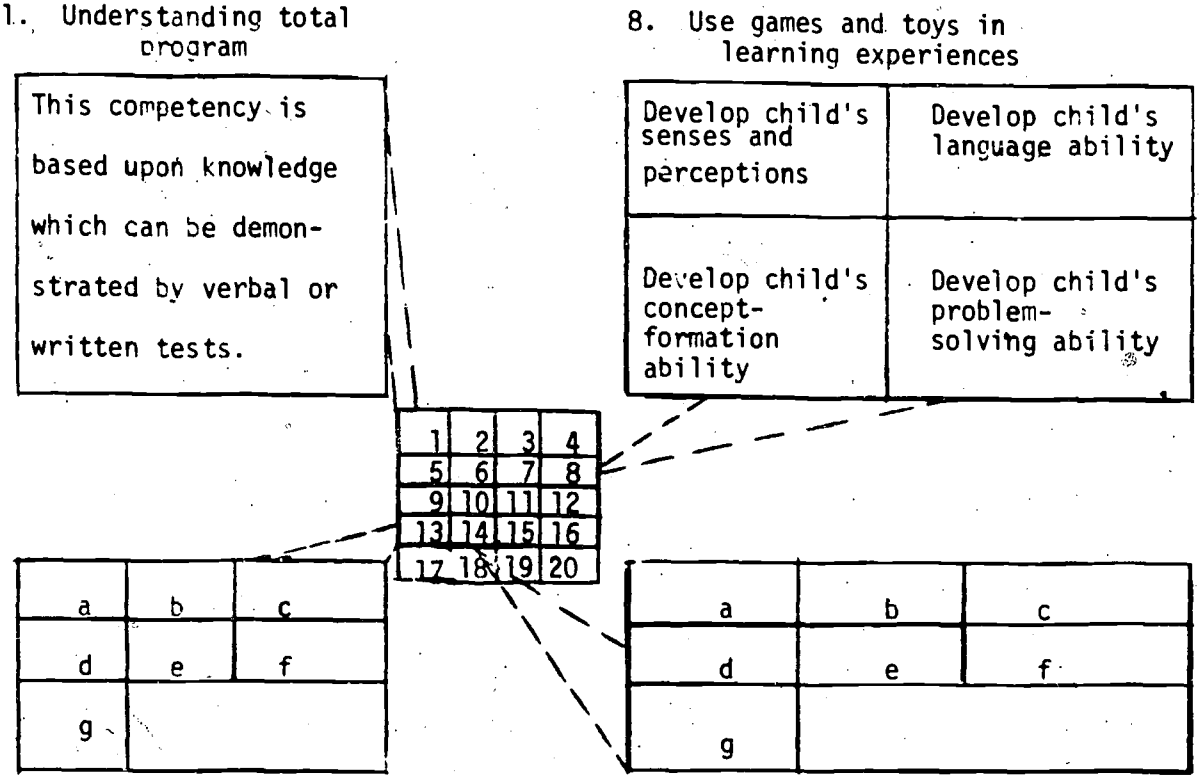
Examples of Competency Units

Chart II is an expansion of the matrix for teacher assistants (B-1) working with three-, four-, or five-year-old children. Four boxes have been expanded as examples to illustrate different kinds of competency units.

The training unit for Competency #1, understanding the total program, can be a fairly simple instructional process using films, slides, lectures, and discussions. Attainment of the competency can be assessed by a verbal or written test. The training unit for Competency #8, using games and toys as learning experiences, would be far more complex. It would involve demonstrations, role playing, and actual classroom practice.

CHART II

COMPETENCY UNITS FOR TEACHER ASSISTANTS WORKING WITH THREE, FOUR-, AND FIVE-YEAR-OLD CHILDREN



*Competency #13 includes training in these specific techniques:

a. Using the child's name.
b. Responding to a child's questions and statements.
c. Using the child's picture.
d. Using specific praise.
e. Using a variety of classroom activities such as songs and role playing.
f. Using stories, games, and other materials that are related to the child's background and experience.
g. Using the child's language.

*Competency #14 includes training in these specific behaviors:

a. Eliminating any demeaning behaviors toward children.
b. Minimizing the use of mild or strong physical force.
c. Using matter-of-fact rules or statements to guide children's behaviors.
d. Using redirection when a problem arises.
e. Anticipating behavior problems and intervening to prevent a problem from occurring.
f. Using specific praise to develop desirable behavior.
g. Developing techniques to organize the group to avoid behavior problems.

The Laboratory has developed an inservice training unit for this competency. The unit consists of a set of eight toys, twenty learning episodes using these toys, and filmstrips and audiotapes for the assistant to follow during the inservice training. The course would consist of at least 16 hours of instruction plus 26 hours of classroom practice over a 16-week period. By current standards this would be worth at least one semester of credit.

The teacher assistant needs this competency at Level 2, production of the behavior; the test of the competency would be whether the assistant could take three of these games and toys, and demonstrate the ability to use them in the way described in the unit. A teacher would be expected to perform at Level 3, developing his own learning episodes and using other games and toys with children. Obviously, the Program Advisor should be able to demonstrate competency at Levels 2, 3, and 4. The Program Director should have knowledge of or be able to observe the competency, Level 1.

Competency #14, controlling the behavior of children in a group situation is more complex than either of the other two; furthermore, the group behavior of children is related to many other activities in the center or classroom. This relationship must be kept in mind, but there are some explicit negative behaviors the adult can eliminate and some positive behaviors the adult can develop within this competency unit.

Examples of these behaviors are:

a. eliminating any demeaning behaviors toward children,

b. minimizing the use of mild or strong physical force,

c. using matter-of-fact rules or statements to guide children's behavior,

d. using redirection when a problem arises,

e. anticipating behavior problems and intervening to prevent a problem from occurring,

f. using specific praise to develop desirable behavior, and

g. developing techniques to organize the group to avoid behavior problems.

The Laboratory has developed training materials to cover all of these behaviors but the material is not organized into the kind of training unit that we have for Competency #8. The test of competency for assistants would be based upon their understanding of the techniques and upon classroom observation of their behavior.

Competency #13, helping children develop healthy self-concepts, is similar to Competency #8. That is, the entire program--the way it is organized, the teaching methods that are used, and the way it responds to the children--affect the children's self-concepts, but there are some techniques that can be learned that we believe will make a difference. Some of them are:

a. using the child's name,

b. responding to a child's questions and statements,

c. using the child's picture,

d. using specific praise,

e. using a variety of classroom activities such as songs and role playing,

f. using stories, games, and other materials that are related to the child's background and experience, and

g. using the child's language.

The same kind of test for competency that applies to #14 would apply to #13.

Some of the competencies obviously overlap so it will probably not be necessary for an individual to use the training unit for every competency. For example, the teacher will probably have to develop the competency of helping children develop self-control by the time he has covered three or four related competencies.

B. STRATEGY

The strategy that has been followed and will be continued can be broken down into six general areas:

(1) Identifying the competencies to be developed and system development;

(2) Identifying the resources that are available for their development;

(3) Developing and testing individual units;

(4) Developing and testing clusters of competencies, competencies for a given role such as teacher assistant, and testing the system;

(5) Developing the relationship with colleges and universities for course credit and certification;

(6) Developing a plan for dissemination and utilization.

I. Identification of Competencies to be Developed

The method of identification up to now has been empirical. That is, as the Laboratory staff has worked with Program Advisors to train assistants and teachers, the staff has identified behaviors that could be clustered as a competency unit and the staff has identified large areas of concern, such as controlling the behavior of children in a group, that can be broken down into competency units and then reassembled as a set of units. For example, there are a set of specific behaviors to (1) eliminate demeaning behavior; (2) eliminate pleading behaviors; (3) increase the use of matter-of-fact positive statements; (4) increase

the ability to redirect a child after a problem has occurred; (5) increase the ability to anticipate a problem and redirect a child before the problem occurs; (6) increase the ability to use the problems that occur as learning situations. These behaviors can be organized into one competency unit designed to help adults control the behavior of children in a group by eliminating some types of behavior and substituting others. Specific behaviors within this competency unit seems reasonable because to eliminate an undesirable behavior necessitates the substitution of a positive one.

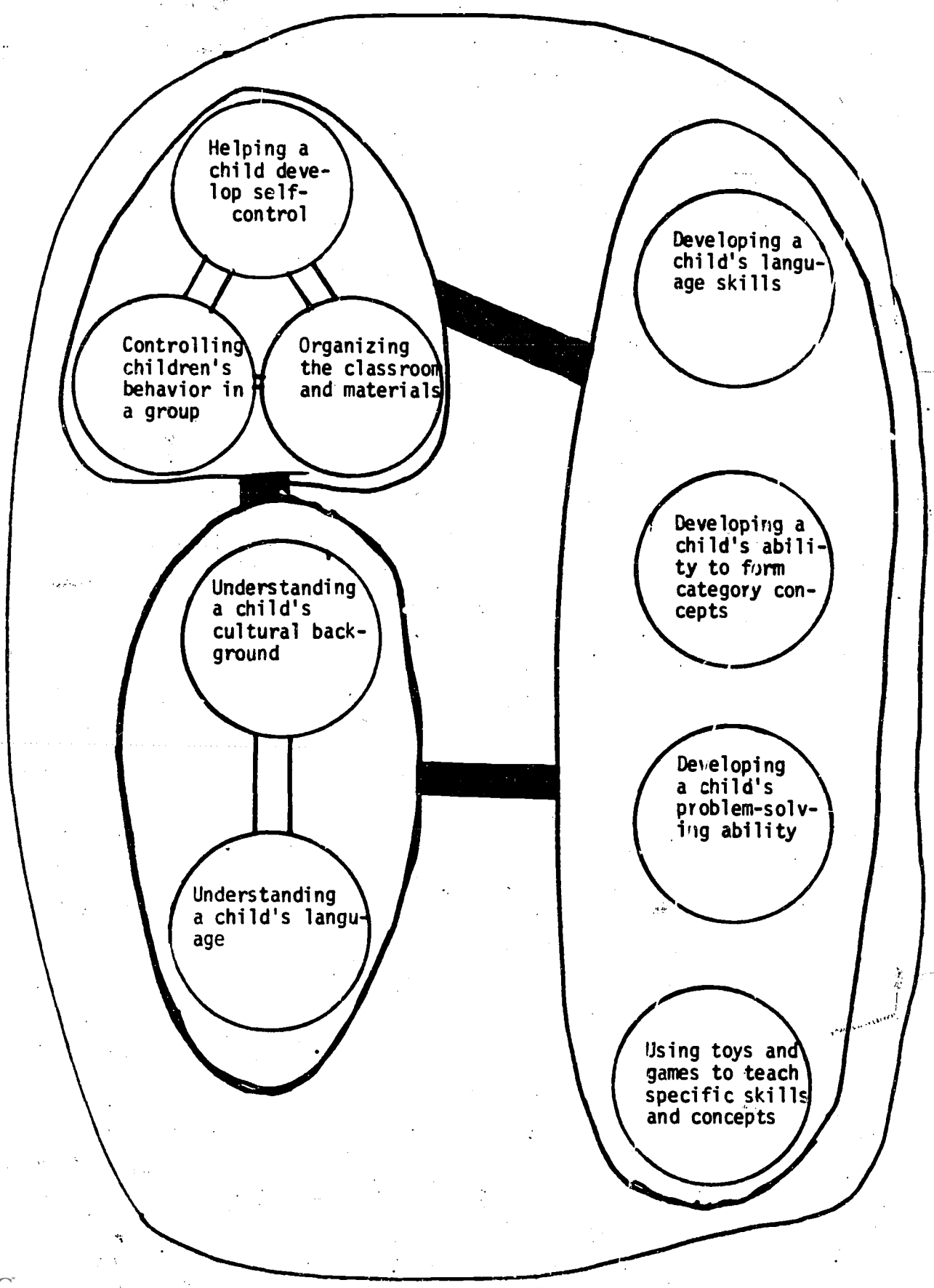
The way the teacher organizes the classroom and uses materials will also affect the behavior of children. A competency unit can be developed around organizing the classroom and the use of materials. This unit should contribute directly to increasing the teacher's competence in working with the children in a positive way as well as to increasing the teacher's competence in providing useful learning experiences.

Other units that are obviously related are: Competency #12, understanding the cultural background and life style of a child; Competency #15, helping children develop self control; Competency #16, working effectively with other adults; and Competency #22, planning. All of these units will interact with each other and with other units; thus the total system is a network of interacting competencies. The schematic drawing in Chart III illustrates this concept. For the purpose of clarity, the chart shows only a few units and indicates only the strongest interactions.

The Laboratory staff has not found any single way to determine how to lable a competency unit or its exact content. A competency can be conceptualized in a variety of ways which lead to different organization schemes and different clusters of competencies. The crucial element is

Chart III

EXAMPLES OF INTERACTING COMPETENCY UNITS



that the competencies overlap so that they reinforce each other and the combination produces the desired results in terms of classroom behavior of the adults and children.

The staff will continue to organize the competency units and cluster of units on an empirical rather than sequential basis. As each unit is outlined and developed, it contributes to the total system analysis, and other units are modified accordingly. Since the staff is reasonably certain that some basic competency units are needed, these will be developed first and tested first as individual units and then in clusters of three or four. After that, some units may be necessary to bridge or link existing clusters. This kind of re-examination of the units, their interrelationship and their relationship to the total system will require the existence of a number of units; thus the re-examination is expected to occur in 1974.

II. Identification of the Resources Available for Their Development

As mentioned above, a major strategy will be to undertake the development of units in the order of need and relevance to the total system. This strategy will be modified to some degree by the availability of resources.

The primary source of materials will be the Early Childhood Education division of the Laboratory. As a part of the development of the existing Head Start and Follow Through training program, the staff has developed materials related to every unit under consideration for development. For example, the New Nursery School book and pamphlets (Nimnicht, McAfee, Meier, 1969) contain 100 or more learning episodes that have been carefully worked out and tested. These can be incorporated in competency units. This task has been completed in

part in the existing Head Start training program, Inservice Teacher Training in the Use of the Responsive Program (Nimnicht et al., 1971). The Follow Through program has developed a parallel set of training materials which has not yet been published. A list of these materials is in Appendix D.

A second source of materials will be other divisions within the Laboratory. The Teacher Education division has been involved in inservice training of teachers since the inception of the Laboratory. Although its focus has been more general and is not related to a particular approach, this division provides a rich resource. For example, the division has already developed a training unit that meets the requirements of this system and can be used with little or no modification: a unit to train teachers in the primary grades to determine the relevance of textbooks for use with Black children. This unit is listed as one of our competency units.

Another division of the Laboratory is producing training modules to help administrators analyze problems, set goals, derive objectives, design instructional programs, implement programs, and evaluate programs. These modules will be carefully analyzed and adapted to our training system. They are listed as Competencies #37 - #42. They are not the first competency units that would have been developed for the system and they will require some revision; perhaps two or three will not fit into our system. Since the the units exist and are readily available for our use, however, our strategy will be to reorder our priorities to take advantage of this opportunity to advance the development of the system with minimum expenditure of time and effort. (These units will not be undertaken until the second phase of development, however; this proposal covers only Phase One.)

A third source of materials will be other developers in the field, such as the Northwest Regional Educational Laboratory which is developing the Competency-Based, Field-Centered, Systems Approach to Elementary Teacher Education. The staff will constantly monitor the field to keep in touch with other developments that could speed up the development and reduce the cost. If we can find competency units that fit in the system and can work out arrangements for their use, we will incorporate them in the system. If we find competency units that offer an alternative to some that we are developing, they will be referenced as alternatives.

The discussion thus far has concentrated on obtaining material for competency units or finding training programs that can be converted into units for use in our program. The focus has been on training for teacher assistants, teachers, Program Advisors who will train the teachers and assistants, and program directors. We are also concerned with finding the human resources to develop competency units for non-teaching personnel. An analysis of the Laboratory staff's capabilities leads to the conclusion that the existing staff is capable of developing the units for the teaching personnel, administrators, and parent coordinators. The staff does not have the capability necessary to develop the units for the personnel in the health component, food and nutrition services, and social services beyond the role of the parent coordinator as a part of social services. The strategy will be to locate other institutions, such as the University of California Medical School, which has been involved in the training of the health personnel, and arrange for those institutions to develop the competencies for the other personnel in the system. The Laboratory

will provide these institutions with models of competency units; provide support services when needed, such as television facilities; and supervise the development of the units.

III. Developing and Testing Individual Units

As noted above, the work in this area will require by far the largest commitment of time and funds over the life of the program. The strategy that will be followed will be essentially the educational product development strategy that is generally followed in all the programs of the Laboratory. This strategy is outlined in Table 2. The application of the strategy to this program will involve the following five major steps for each of the competency units to be developed:

1. Detailed specification of the objectives and outcomes of the training unit.
2. Outline of the training unit content, and statement of specific criteria for determining the different levels of developed competency and equivalence of college credits.
3. Completion of preliminary form of the unit.
4. Preliminary form testing, formative evaluation, and revision of the unit or termination of work on the unit.
5. Main field test of the effectiveness of the unit, with principal attention given to summative evaluation.

The steps in Table 2 indicate the basic guidelines that will be followed. Section J, Dissemination and Implementation, will be discussed under Component VI below.

~~Table 2~~

THE STEPS IN THE RESEARCH AND DEVELOPMENT STRATEGY

A. Develop preliminary outline of product

1. Review literature.
2. Prepare outline of product including statement of specific objectives or behavioral changes to be achieved and a plan of activities to be carried out.

B. Develop preliminary form of product

3. Prepare scripts for audio or visual materials to be included.
4. Record, edit, dub audio or visual materials.
5. Prepare written materials including evaluation and feedback forms.

C. Conduct preliminary field test

6. Conduct preliminary test in 1 to 3 sites, using 4 to 12 subjects.
7. Evaluate results of field test.

D. Produce main product revision

8. Revise audio or visual materials.
9. Record, edit, dub revised audio or visual materials.
10. Revise written materials.
11. Prepare after-training follow-up materials if to be included in product.

E. Conduct main field test

12. Conduct field test using sample of 30-75 subjects.
13. Collect pre-training and post-training records of subjects' performance.
14. Collect delayed post-training data if to be obtained.
15. Evaluate main field test results to determine if product meets the specific behavioral criteria established.

F. Produce operational product revision

16. Revise materials for operational test.
17. Prepare complete implementation package including all materials needed to use the product without help from Laboratory personnel.

G. Conduct operational field test

18. Train operational test coordinators, if necessary.
19. Conduct operational test.
20. Evaluate operational field test results.

H. Produce final product revisions

21. Make final revisions in the product.

I. Prepare final report

22. Prepare and distribute research report giving results of all field testing.

J. Dissemination and implementation

23. Distribute product for general use.
24. Implement product in schools, universities, colleges.

IV. Developing and Testing Clusters of Competencies for a Given Role, and Testing the System.

The activities in this area of concern will feed back into the first area, identification of competencies and system development.

The general strategy will be to test each unit as it is developed, and then to form clusters of units and test the combined effect of the units on some general dimension of the program such as classroom control, the learning process in the classroom, the curriculum content, a child's self-concept, or cognitive development. Different clusters will be tested in different situations.

The approach will be to work with the same classrooms over an extended period of time. We will introduce different clusters of competency units in different classrooms, but at the completion of the project all of the classrooms will be included in the system analysis.

Using a parallel approach with a different sample, we will study the changes in behavior of persons in different roles as they select and study different competencies in order to determine where linking or bridging is necessary and the effect of the total system on different roles.

V. Developing a Relationship with Colleges and Universities for Course Credit and Certification.

Any training system which is to be effective in career development must find a way either to modify the established system of career development or to fit into the established system. Our strategy will be to plug into the ongoing system of education and certification of teachers and related personnel and to obtain college recognition of

the training. We chose this approach after considering a variety of alternatives. One alternative was to develop a competing system; for example, national associations of teaching personnel could certify members or the Laboratory could certify the training and perhaps even become a university itself. Another alternative was to work through certification at the state level. The reasons for accepting the alternatives of working with colleges and universities and rejecting the other alternatives are:

1. The Flexible Training System will be complete in the sense that it will provide the understanding and behaviors necessary to fill the various roles that have been discussed, but it is not a complete educational program. To complete it requires a broader education that can be acquired only through self-instruction or at colleges and universities.
2. Some outside agency needs to be involved to make certain that high standards are maintained. This is essential to the success of the program and it is also essential to avoid confrontations with professional organizations and accrediting agencies.
3. College and university credit will be understood when a trainee wishes to apply for certification for a different position or transfer from one state to another.
4. Working with colleges and universities offers a greater opportunity to modify the existing system of career development to accommodate new approaches.

The specific approach in carrying out this strategy will be to establish a relationship with at least two universities or four-year colleges whose credit is not questioned when transferred to another institution or used for certification purposes.

In cooperation with the Laboratory staff one or two faculty members from each institution will:

(1) advise the Laboratory in the development of units;

(2) have the units reviewed by his or her institution and have credit assigned;

(3) observe or train others to observe whether a trainee has achieved a specified competency and what level has been attained, and to grant credit on the basis of the observation;

(4) test some of the competency units on campus in pre-service education courses;

(5) plan and arrange with other departments a program that will lead to AA and AB degrees that incorporate the Flexible Training System. Ultimately the entire program could become a competency-based system.

As the system develops, other institutions will be invited to join so that eventually a network of at least ten institutions across the country will be involved in the system.

VI. Developing a Plan for Dissemination and Utilization

Since one of the purposes of the system is to develop a flexible inservice training program that will allow teachers to choose the specific competencies they would like to develop, one strategy will be to produce each competency unit as a self-contained unit that can be

published and distributed through normal channels, so that each unit can be made available as soon as the development cycle is completed. Particularly at the pre-kindergarten level, many individuals are under considerable pressure to become certified; and federal guidelines will insist upon an educational component in every day care center. Providing some method to certify the competency of the early childhood specialist (a person operating at the level of the teacher as defined in this proposal) and to provide training for such persons has been set as the top priority of the Office of Child Development (Zigler, 1971).

The knowledge that these training units exist should suffice to insure an immediate demand by many potential users. Dissemination of the knowledge of the existence of the units will be accomplished through notification of the appropriate individual in the regional office of the Office of Child Development, the publication of reports in various professional journals and the general dissemination of information by the Laboratory on its activities.

The major strategy for the dissemination of the total system will be to use the network of colleges and universities which are cooperating and offering credit. As demand increases, the network can be expanded and faculty members at each institution can be trained to use the system. This arrangement will satisfy the objective of career development.

There is a consistent demand from school districts for inservice training courses to upgrade the quality of their staff, and individual teachers are constantly seeking course credit to maintain their credentials or to obtain salary increases. Both of these needs are

typically met by colleges and universities. If the Laboratory can provide them with more effective tools to meet this need, some institutions will probably use the system as a part of the ongoing inservice program for teachers.

C. WORK PLAN

The development of a work plan for this program is difficult for two reasons:

(1) The competency units will not be uniform units with similar formats. Some will involve a simple format such as a printed guide with work sheets; for example, the competency unit on the relevance of textbooks for Black children consists of 120 pages of instructional materials and exercises to be carried out by the learner. Other units will be far more complex. The competency unit on observing the classroom behavior of teachers, analyzing the observations, and providing useful feedback to the teachers, for example, will require written materials, instructional videotapes, analysis by some trained person of the trainee's analysis of videotapes and actual practice in classroom observation in company with a trained observer who can analyze the effectiveness of the observation, analysis, and feedback. Thus some units can be developed by one person in a matter of months (although the testing will require considerable time), and will be virtually self-contained. For other units, development will require several persons' efforts for an extended period of time (we have already invested over two man-years in the competency unit on observing), production will be complex and expensive, and the format will involve a trained person as well as materials.

(2) The second cause of difficulty is also a major virtue of the program. The program takes advantage of existing work that has been completed by the division and of work by other developers,

inside and outside the Laboratory, and it anticipates the use of other funding resources to complete some of the competency units. The major focus of the program is to develop and test the system but in order to accomplish this we must be flexible enough in our planning to: (1) finish and test units developed under other programs such as Follow Through; (2) modify units developed for other purposes by other developers; (3) utilize other resources for the development of some units. Because of these variables, the work plan must be tentative, subject to periodic review and change, as various units are revised, developed, and/or completed.

The central core of the work plans will be the development and testing of the total system. Because the system is complex and the variables are difficult to pin down, we are proposing to proceed in three phases:

1. Development and testing of the subsystem for teacher assistants for three-, four- and five-year-old children. A teacher assistant subsystem is the smallest element that will constitute a complete segment of the training system; and the need for this subsystem is the greatest.
2. Development and testing of the subsystems for teacher assistants for older children and for teachers, trainers and administrators at both levels.
3. Development and testing of the system for other personnel.

The work plan shows the completion of Phase One in 1976. This plan is based upon the following assumptions:

1. The first assumption is that the level of support for this program will be about $330,000.
2. The second assumption is that there will be no additional support that will directly aid the program. We are assuming that the level of support from Follow Through after June, 1973 will cover only the continued cost of training teachers in Follow Through districts and will not provide any funds for development. We are also assuming that the Office of Child Development will not fund specific activities related directly to this program of training and accrediting Child Development Specialists; this latter hypothesis may prove incorrect, however, because the Laboratory will be applying to the Office of Child Development for support.
3. The third assumption pertains to the cost of development. The Laboratory has a cost accounting system that allows the staff to make reasonable cost estimates, but it is not very helpful in this instance because of the wide variation that will exist among competency units. Some units will require a set of toys and games, others will involve extensive use of film or videotape, and others will contain only printed materials. With this variation, it is difficult to estimate the cost as closely as we would like. We are assuming that the cost of finishing the units initiated by Follow Through, producing enough copies for an operational test and conducting the test will be $10,000 per unit. Furthermore, we estimate that the average amount of effort needed to develop a unit will be about one and a half man-years plus support services including supplies, films and videotapes, and thus the average cost will be about $37,500 over eighteen months or $25,000 a year for each unit under development.

If these assumptions are not correct--if the funding level of Follow Through is high enough to support some continued development activities, for example, or if we receive additional funding from the Office of Child Development--the effort will be to complete the system for the assistants in the kindergarten through the third grade as a part of Phase One. If we can apply other resources to the development of competency units, the work plans will shift to system development and testing.

The work plans for each component are outlined below. Chart IV on page 75 summarizes the work plans by component for each year.

Component I Identification of Competency Units and System Development

The current status--The general system specifications have been developed and preliminary identification of the competencies to be included in the system has been made.

The anticipated status on November 30, 1972--No additional work is anticipated on this component before that time.

Activities during 1973--The only activity that is anticipated is some identification of omissions in current statements of competencies. System specifications and competencies will be revised in 1974 on the basis of the work through 1973.

Component II Identification of Resources that are Available for the Development of Competency Units

The resources available within the division of Early Childhood Education have already been identified. The plans discussed below refer to the resources available from outside this division.

The current status--Seven training units being developed by other divisions in the Laboratory that could be modified to become competency

units have been identified. Six of these are training units for administrators which have been listed as Competencies #37 to #42 in Table I on pages 31-33. The seventh (Evaluating Reading Material for Cultural Relevance) will become Competency #24 for teachers. This particular competency unit illustrates a development strategy we will use. In its present form, the unit can be used to train teachers to analyze the relevance of books for Black children in the first, second and third grades. We will use for that purpose and we will also use it as a model, modifying it for use in analyzing materials for preschool Black children, and for analyzing materials for Mexican-American or other children at both age levels when the time and resources are available.

The anticipated status on November 30, 1972--By the end of this year the review of Laboratory materials should be completed.

Activities during 1973--The activities during 1973 will consist of continuing to look for units being developed by other agencies that can be incorporated into the system. This activity will be continuous but it should not require a large commitment of time and resources.

Preliminary activity in identifying other institutions to develop competency units has begun on an informal basis but no major effort will go into this activity before 1974.

Component III - Developing and Testing Individual Competency Units

The current status--The work plan presented in Tables 3 and 4 shows the state of development as of March, 1972 and projects the work for the year. There is some repetition in these tables because in some instances the same unit applies at both levels. Table 3 illustrates the development of units for personnel working with children in kindergarten through third grade and Table 4 illustrates the development of units for personnel working

with three-, four-, and five-year-old children. There is some repetition in the two tables because some competencies are the same for both age levels.

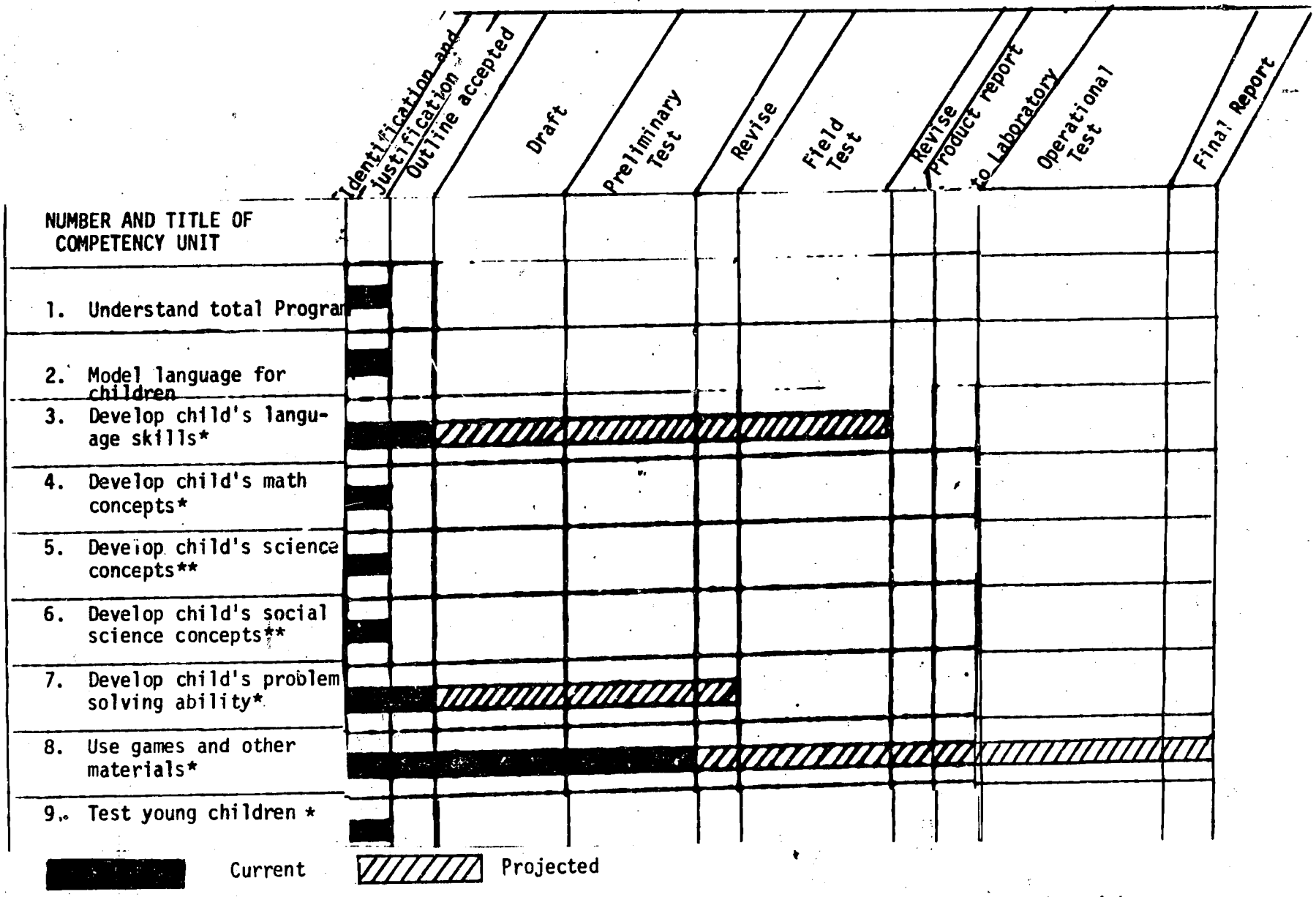
Anticipated status on November 30, 1972--By the end of the year work will have been completed on Competency #19, using the Learning Booth, Competency #8, using games and toys to help children learn specific skills and concepts, and Competency #18, conducting the Parent/Child Toy-Lending Library Program, for personnel working with both age groups.

Work will be in progress on nine additional competencies (#3, #7, #12, #13, #14, #24, #25, #26, and #29) for personnel working with kindergarten to third grade children. Five of these competencies (#12, #13, #14, #26, #29) will require no modification for personnel working with preschool children.

This development will have been accomplished primarily through the Follow Through program with an investment only of $70,000 from the present NCERD-DRDR contract. The $70,000 is crucial, however, because the primary objective of the Follow Through program is to test a specific model program for children in kindergarten through the third grade; under the Follow Through program, competency units can be developed only to the extent that they contribute to the immediate and direct needs of training teachers and assistant teachers to carry out that model program. There are no provisions for refining the units for use by other interested users or testing them outside of the context of Follow Through--in other words, there are no provisions for an operational test. Thus, although the Follow Through program will cover a major share of the cost of the development in 1972 and 1973, the system development must be carried out under this proposal.

TABLE 3

CURRENT STATUS AND STATUS PROJECTED FOR THE END OF 1972 OF DEVELOPMENT OF COMPETENCY UNITS FOR PERSONNEL WORKING WITH KINDERGARTEN THROUGH THIRD GRADE CHILDREN



*An asterisk indicates that the competency unit will contain different content for adults working with different age groups but the procedure will remain the same.

**A double asterisk indicates there will be considerable change in the competency unit for different age groups.

No asterisk indicates that there will be no change from one age group to another.

Table 3 continued

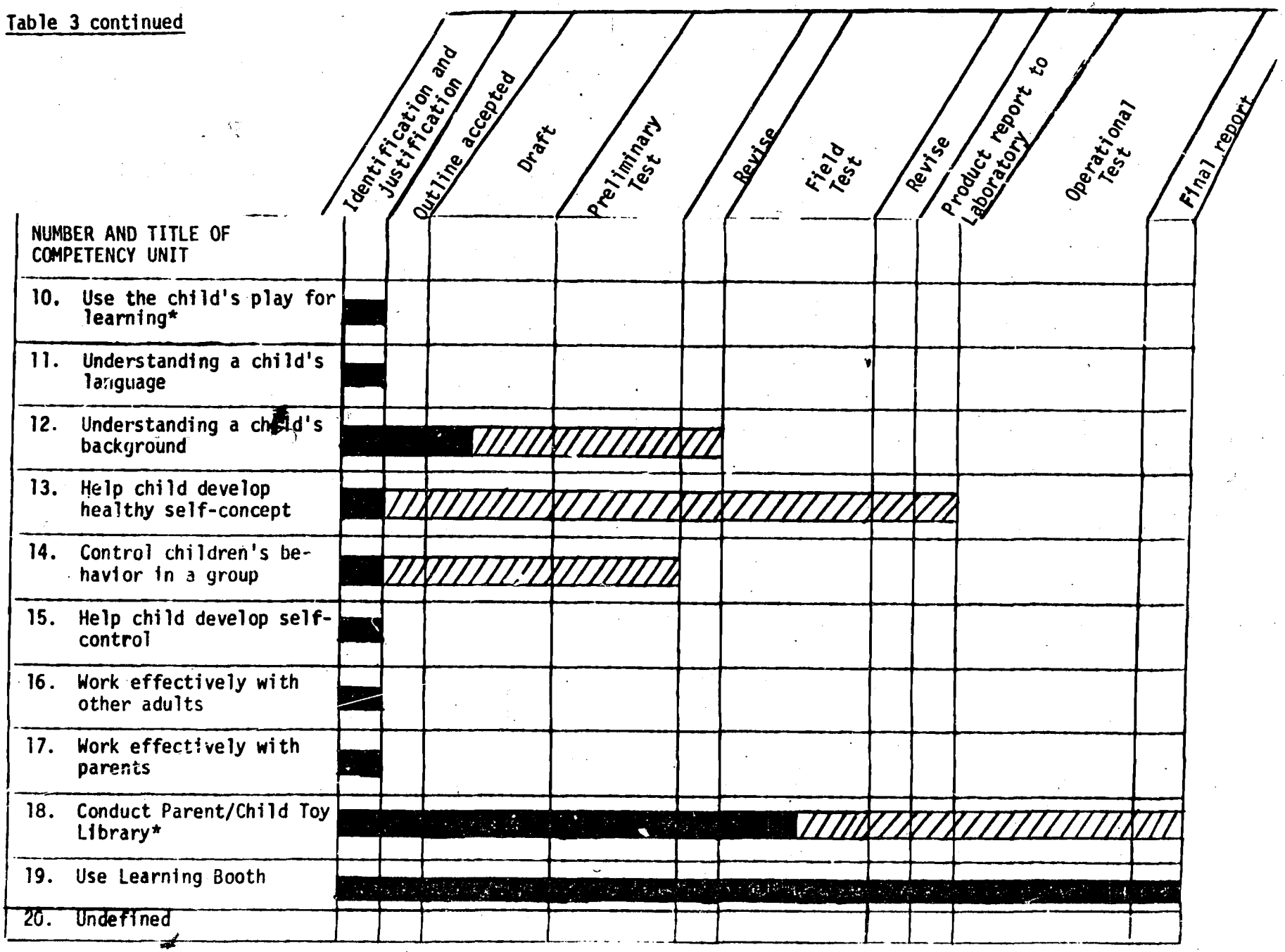


Table 3 continued

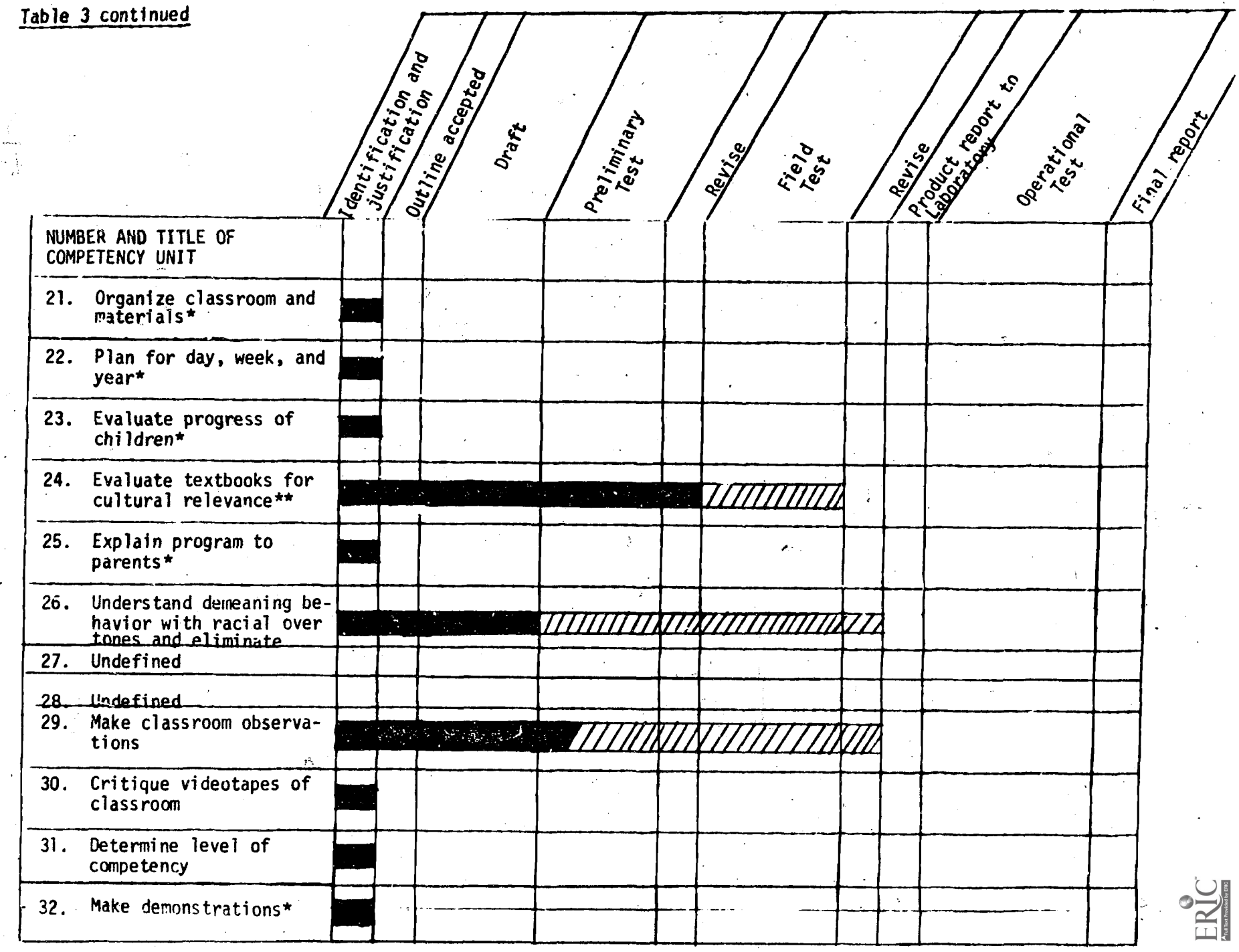
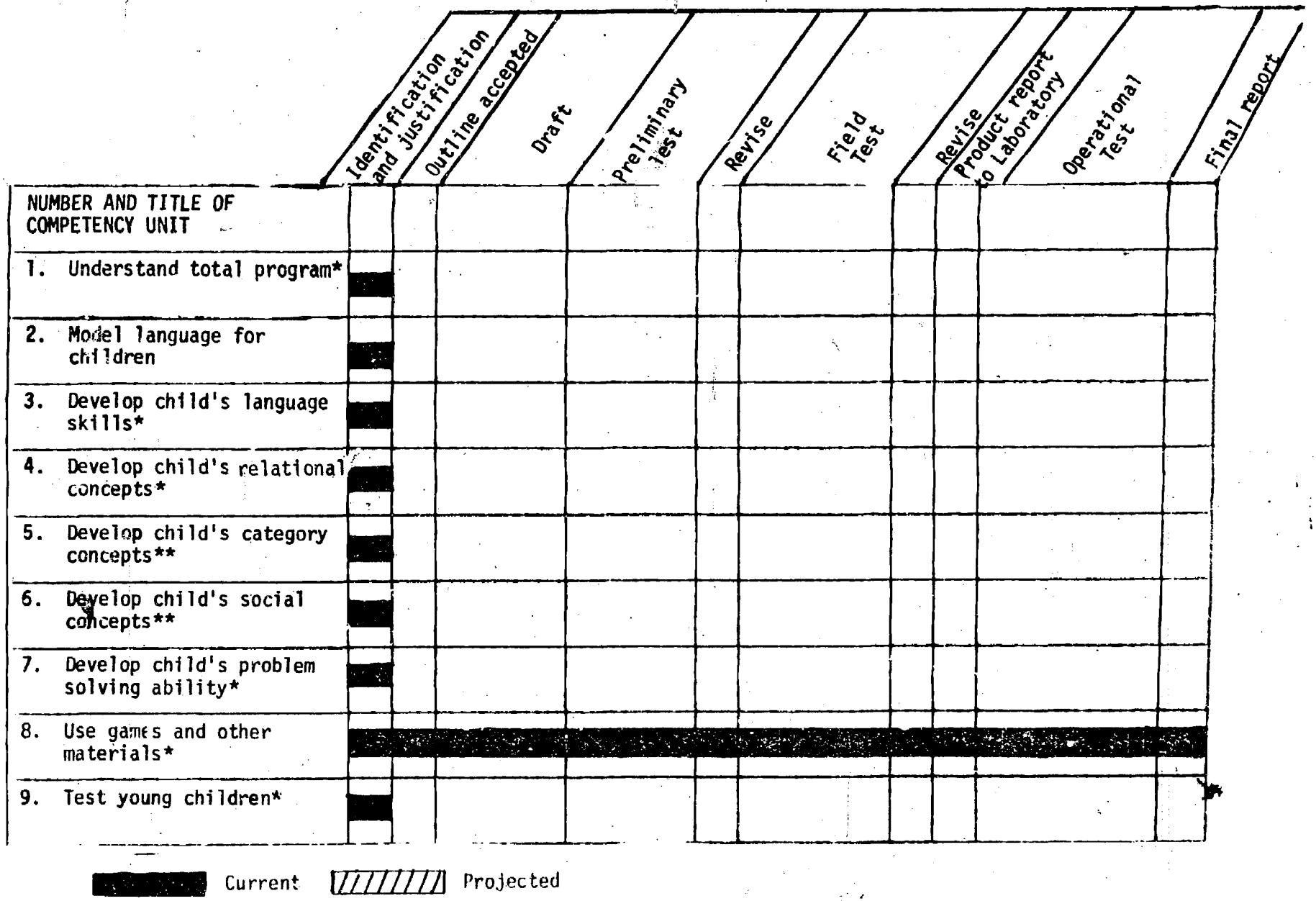


Table 3 continued

NAME AND TITLE OF COMPETENCY UNIT	Identification and justification	Outline accepted	Draft	Preliminary Test	Revise	Field Test	Revise Product report to Laboratory	Operational Test	Final report
33. Conduct workshops*	■								
34. Involve parents*	■								
35. Undefined									
36. Undefined									
37. Set goals*	■								
38. Analyze problems*	■								
39. Derive objectives*	■								
40. Design instructional program*	■								
41. Plan program implementation*	■								
42. Plan program evaluation*	■								
43. Undefined									
44. Undefined									

TABLE 4

CURRENT STATUS AND STATUS PROJECTED FOR THE END OF 1972 OF DEVELOPMENT OF COMPETENCY UNITS FOR PERSONNEL WORKING WITH THREE-, FOUR-, AND FIVE-YEAR-OLD CHILDREN



*An asterisk indicates that the competency unit will contain different content for adults working with different age groups but the procedure will remain the same.

**A double asterisk indicates there will be considerable change in the competency unit for different age groups. No asterisk indicates that there will be no change from one age group to another.

Table 4 continued

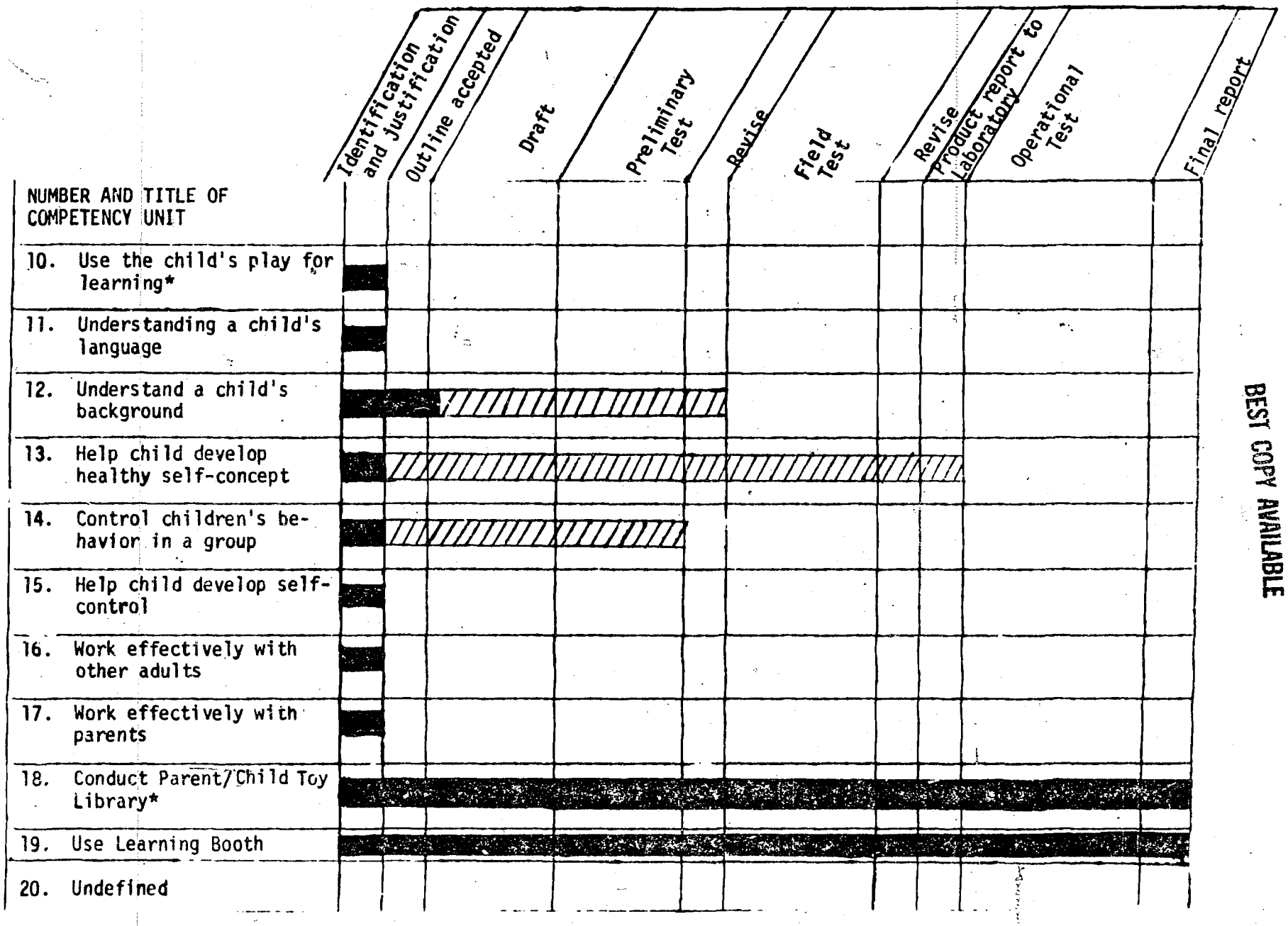


Table 4 Continued

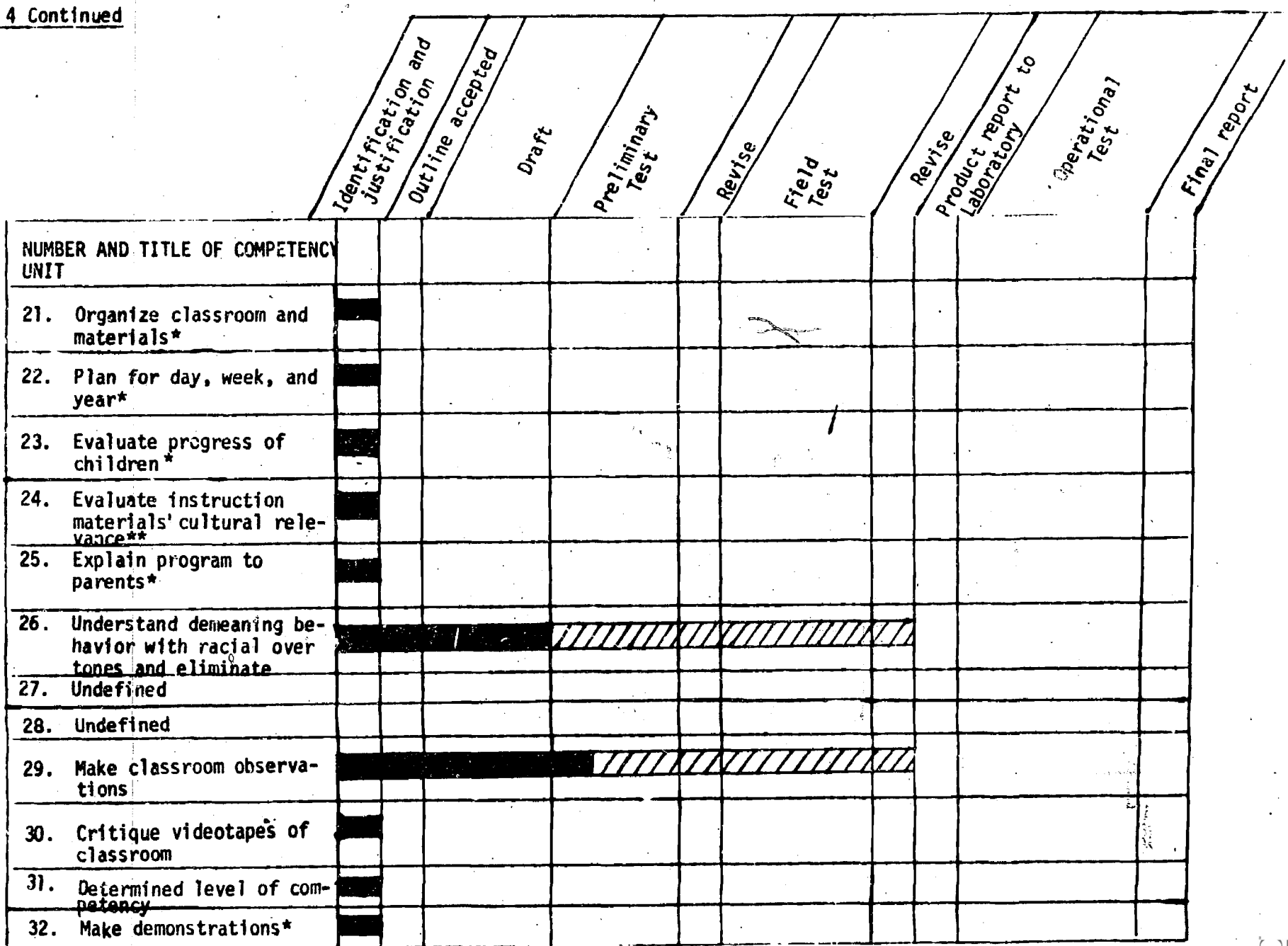


Table 4 continued

NAME AND TITLE OF COMPETENCY UNIT	Identification and justification	Outline accepted	Draft	Preliminary Test	Revise	Field Test	Revise	Product report to Laboratory	Operational Test	Final report
33. Conduct workshops*	■									
34. Involve parents*	■									
35. Undefined										
36. Undefined										
37. Set goals*	■									
38. Analyze problems*	■									
39. Derive objectives*	■									
40. Design instructional program*	■									
41. Plan program implementation*	■									
42. Plan program evaluation*	■									
43. Undefined										
44. Undefined										

Anticipated activities in 1973--On the basis of the assumptions discussed above, the work plan for 1973 is divided into two parts:

1. Completing and conducting operational tests on the nine competencies initiated under the Follow Through program (Competencies #3, #7, #12, #13, #14, #24, #25, #26 and #29). Five of these units (#12, #13, #14, #26 and #29) will apply without modification to personnel working with both age groups. In the other four units (#3, #7, #24, and #25), we will make the modifications necessary for personnel working with three- to five-year-old children. The estimated cost of completing and modifying these nine units is $90,000.
2. Initiating the development of additional competency units for assistant teachers working with three-, four-, and five-year-old children. The units to be given priority will be:
   A. Competency units directly related to the classroom performance of the teacher assistant. The immediate concern of assistants and their supervisors is the classroom behavior of the assistant, particularly as it relates to developing the intellectual abilities of children. Our past experience with training has been to start with those competencies directly related to classroom performance and then move to other competencies;
   B. Units that can be used in the training of the largest number of staff in different roles throughout the program;
   C. Units that will serve as training units both for assistants working with three-, four-, and five-year-old children and for those working with kindergarten through third grade children;
   D. Units that can be easily modified for use with kindergarten through third grade children.

Applying these criteria we will initiate work during 1973 on the following competency units for teacher assistants working with three- to five-year-old children:

#1 Understanding the total program

#2 Modeling language for children

#4 Developing the child's ability to form relational concepts

#11 Understanding the child's language (two forms, one dealing with Mexican-American children and the other with Black children)

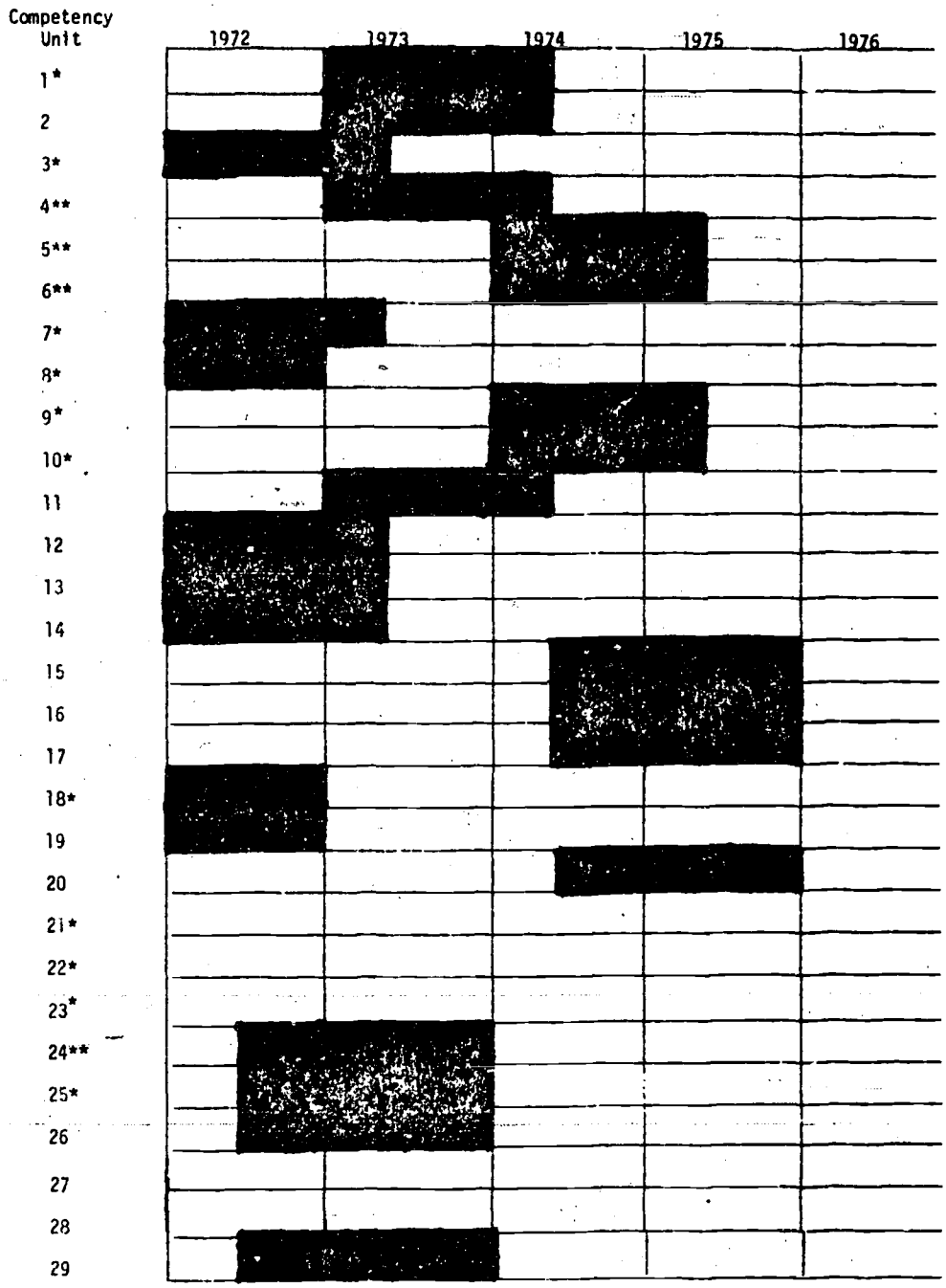
Projecting beyond 1973, we will complete these four units in 1974, thus completing in order for the teacher assistant working with three-, four-, and five-year-old children twelve competency units out of twenty. During 1974, work will be initiated on the remaining eight units (#5, #6, #9, #10, #15, #16, #17, and #20). These units will be completed in 1975; the testing of the subsystem, described under Component IV, will be completed in 1976. If the amounts of time and effort required are lower than we have projected, the saving will be invested in work on the units that require modification for personnel working with older children. Table 5 summarizes the schedule for the development of individual competency units. Chart V indicates which competency units in the total system will be completed at the end of Phase One.

Component IV - Testing Clusters of Competencies

No work has been initiated on this component and none is anticipated before 1974. By March of 1974, at least four experimental groups should be established and operating to test the various clusters of competencies. This testing will continue through 1976. By 1974, twelve competency units should be complete. It should be possible for an individual trainee to complete four units a year and some combination of sixteen units should produce the competency required of a teacher assistant. We will test clusters of competencies by

Table 5

SUMMARY OF WORK PLAN FOR COMPONENT III:
DEVELOPMENT OF COMPETENCY UNITS



* An asterick indicates that the competency unit will involve some changes in content for different age groups. When necessary, competency units initiated under the Follow Thourgh program will be modified for personnel working with preschool children.

**Two astericks indicate that the competency unit will involve considerable change for different age groups.

No asterick indicates that no modification is needed.

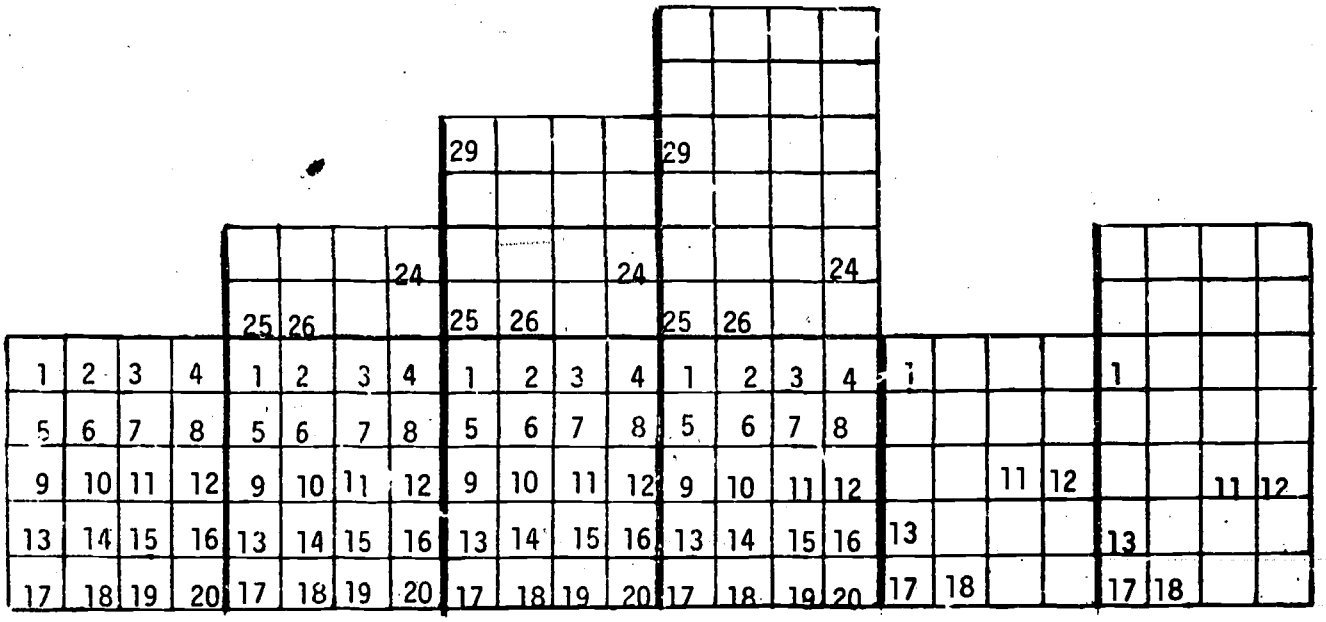
The titles of competency units are listed in Table 1 on pp. 31 to 33.

CHART V

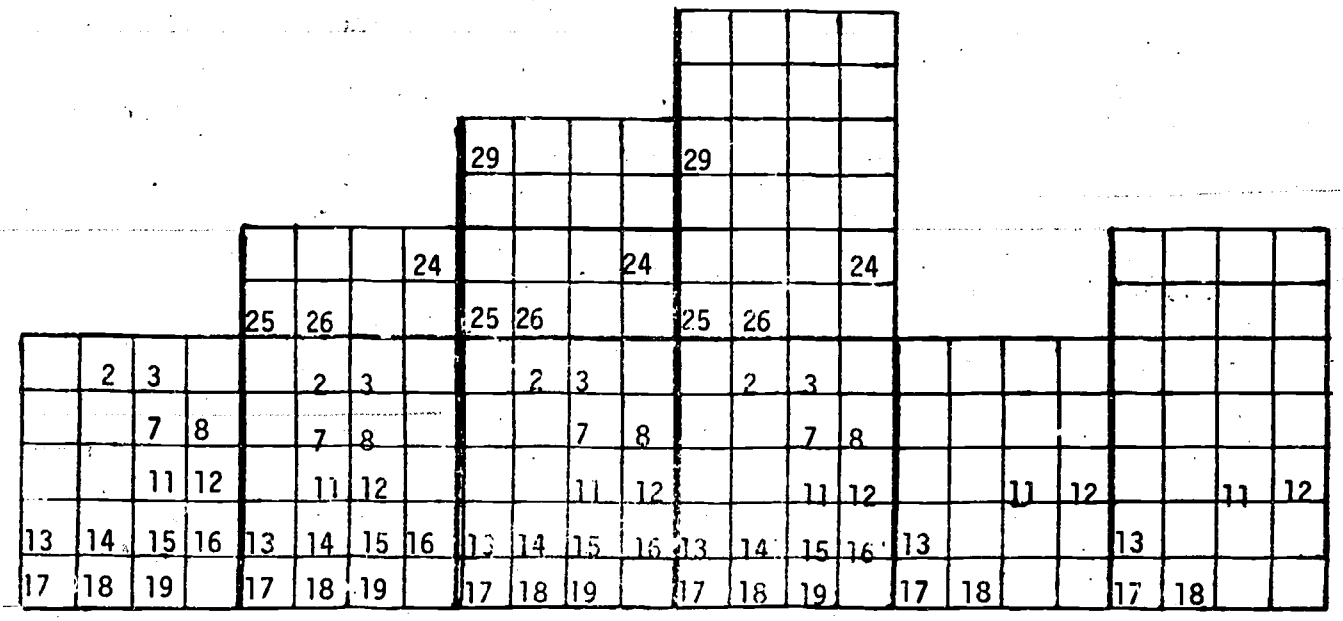
COMPETENCY UNITS COMPLETED IN 1976

A. For Personnel Working With Three- to Five-Year-Old Children

Teacher Assistant | Teacher | Program Advisor | Program Director | Parent Coordinator | Social Service Worker



B. For Personnel Working With Kindergarten Through Third Grade Children



working with 60 teacher assistants taking different sequences of competency units. The check points for each individual will occur at the completion of each unit. Since the system is designed to be individualized and flexible, we cannot impose any set pattern upon the learners, but out of a sample of 60 teacher assistants some natural clusters should occur and probably about 40 of these trainees will complete the program in three years or less. This will give us an adequate test of the system for teacher assistants by the end of 1976.

Component V - Developing Relationships with Colleges and Universities to Work Out a System for Providing Credit Based Upon the Competency Units and Levels of Competency

The current status--Preliminary discussions have been held with the faculties in elementary education at San Francisco State College and Utah State University. Both of these groups have agreed to cooperate with the Laboratory in giving credit for the competency units. Several junior colleges are also interested.

The anticipated status on November 30, 1972--By the end of this year, the Laboratory should have working agreements with at least two four-year colleges or universities to cooperate with the Laboratory in testing the competency units and awarding credit. A byproduct of this activity should be some experimental work with the units in preservice education.

Activities during 1973--There will be no major effort to establish more agreements with other institutions during 1973. Opportunities that arise for such agreements will be explored but it will not be necessary to work with more than two universities until several competency units have been developed and are ready for distribution. By 1974 this development should have occurred and we will attempt to establish agreements with eight additional institutions.

Component VI - Developing a Plan for Dissemination and Utilization

In order to provide maximum utilization of the training, individual competency units will be published and disseminated as they are completed. The plan for dissemination of the total subsystem will be developed in Phase Two.

CHART IV

PHASE ONE WORK PLAN

	1973	1974	1975	1976
Component I		Revise of systems specifications and competencies	Plan for Phase Two	
Component II	Continue search for units	Plan for Phase Two		
Component III	Complete five competency units (#3, #7, #12, #13, and #14) Initiate four competency units (#1, #2, #4, #11)	Complete four competency units (#1, #2, #4, and #11) Initiate seven competency units (#5, #6, #9, #10, #16, #17, and #20)	Complete eight competency units (#5, #6, #9, #10, #15, #16, #17, and #20)	
Component IV		Initiate testing of clusters of competency units for teacher assitants working with 3- to 5-year-old children	Continue testing of clusters of competency units for teacher assistants working with 3- to 5-year-old Children	Complete test of training system for teacher assistants working with 3- to 5-year-old children
Component V	Work with two universities or colleges	Work with two universities or colleges	Work with ten institutions	Work with ten institutions
Component VI	Publish and disseminate eight competency units (including three completed in 1972) for teacher assistants	Publish and disseminate twelve competency units for teacher assistants working with 3- to 5-year-old children	Publish and disseminate 20 competency units for teacher assistants working with 3- to 5-year-old children	Publish and disseminate 20 competency units for teacher assistants working with 3- to 5-year-old Children

D. EVALUATION

Three forms of evaluation are relevant to the assessment of the system: evaluation as part of the development cycle; evaluation of the effects of the system upon the school or center, the children, and their parents; and evaluation of the work in relationship to performance criteria.

Evaluation of Development

The first form of evaluation is an integral part of the development cycle. It will seek to answer the following questions:

(1) Does a competency unit accomplish its stated purpose?

(2) Does a cluster of units accomplish its purpose?

(3) Does a subsystem such as the system for training teacher assistants accomplish its purpose?

The evaluation on an individual unit will require that the objective of the unit be clearly defined, and that we assess what an individual knows or can do before taking the training and what he knows or can do after taking the training. This assessment will be an essential part of every unit in the total system. Determining levels of competency and devising reliable ways of assessing them will probably be one of the most difficult tasks in both development and evaluation. We assume we will use a variety of techniques, including oral and written tests, videotaping of classroom behavior and analysis of the videotapes, observation in the classroom, and simulation techniques. At the outset we will expect 80% of the individuals who complete the unit to be able to demonstrate the competency at the appropriate level.

Because individual trainees will take different clusters of competency units, the evaluation of a cluster will have to proceed on an individual basis. We will compare the effects of different clusters on behavior on the assistants.

It is not possible, and it is probably not appropriate, to set levels of performance of various clusters. The purpose of evaluating the units in clusters will be to modify the competencies so that they complement and reinforce each other. The effect of taking four competency units, for example, should be that the behaviors covered in each unit are strengthened. A person who performs at Level 2 at the end of training in a given competency might move up to Level 3 in that competency after taking three more related competency units. Another concern in the evaluation of clusters is whether a cluster of competency units increases the ability of the trainee to integrate the behaviors in a complementary way.

The testing of one substystem for the teacher assistants would complete Phase One. At this level of evaluation the observation of behavior will be a general sampling of behaviors from various units but we will be observing for the overall behavior of the assistant. We will use a quantifiable observation and interview schedule for this assessment. Such an instrument is currently under development.

Evaluation of the Effects of the Total System

The next set of concerns for evaluation is the effects of the total system upon the school or center, upon the children in the school or center, and upon the parents of the children.

The evaluation of the system in relationship to changes in the school or center and in children's behavior will not be a part of Phase One because more of the system will need to be developed and in place to make this form of evaluation feasible.

Evaluation in Relationship to Performance Criteria

The third form of evaluation will consider the work in relationship to performance criteria. The immediate concerns will be:

(1) Are the production schedules as outlined in the work plans met?

(2) Has the system utilized existing resources?

(3) Have arrangements been completed to award college credit for the units?

Intermediate indicators of success at the end of Phase One will be:

(1) Whether clusters of competency units are being tested.

(2) The number of Head Start, Day Care and kindergarten through third grade classrooms that are using the completed competency units on a continuing basis.

(3) The number of college credits being awarded for the completion of competency units.

(4) The number of low-income personnel who are involved in a career education program based on the use of competency units.

The long-terms indicators of success after the program has been completed and disseminated for a year will be:

(1) The number of low-income persons involved in career development using the competency units.

(2) The number of universities and colleges that offer credit based upon observed competency.

(3) The number of Day Care centers and Head Start programs using the competency units for inservice training.

(4) The extent to which educators are selecting specific skills to upgrade their teaching effectiveness in specific areas.

(5) The extent to which school systems or parts of school systems have adopted the entire system.

G. RELATION TO OTHER LABORATORY PROGRAMS

Several specific relationships between this program and other programs within the Laboratory have been discussed above under the strategy and work plan for Component II. The following discussion is directed to the broader relationship of this program with other programs within the Laboratory.

All of the Laboratory's programs are derived from the institutional mission of providing increased opportunities for children to learn. Under this broad statement, by far the greatest part of the work of the various programs is focused on increasing the capability of adults who work with children--parents, teachers, adminstrators--to provide increased opportunities for the children. Obviously, many different adult roles are essential to the development of children. Equally obvious is the fact that the nature of specific roles, and the skills needed in these roles will vary as a function of the characteristics of the children and the environments in which they live and learn. Finally, adult roles can be separated by major functions. They interact in various ways and in various settings.

For the most part, the distinctions among the Laboratory programs result from differences in the adult roles and learning environment to which the program efforts are directed. Thus, for example, three major program efforts have components directed to teacher training; two of these are funded by NCERD-DRDR and the third is funded by other agencies. But each program is directed to teachers who are or will be functioning in largely unique settings with children of different backgrounds and interests.

Even though the efforts of the various programs are appropriately directed to different aspects of similarly named adult roles, there are clearly overlapping interests and problems among the programs. The Laboratory has arranged a formal procedure to insure that staff of different programs are cognizant

of overlapping interest and work. In addition, of course, there are various informal means of communication and interrelation of program work.

The formal structure to facilitate communication has two parts:

1. The Program Review Board which meets twice a month. The Board is composed of two members from each of the Product Development Divisions, the Laboratory Director, and the Associate Laboratory Director for Planning. One meeting each month is devoted to reporting on division progress at a rather detailed level. The second meeting is devoted to consideration of topics of common interest across programs.
2. The Director's Council, which meets once or twice a month as necessary to consider problems more generally related to the management of the Laboratory as an institution. This council is composed of the Laboratory Director and the eight Division Directors.

Although all the meetings of these two groups are concerned with matters of common interest to several programs, the progress reporting session of the Program Review Board is the one that most directly affects program work. As progress and problems in each of the programs are reported and discussed, areas of common interest, potential mutual support, or possible duplication are identified. As necessary, specific plans are made to pursue these in more detail with specific assignment of responsibilities.

H. PAST ACCOMPLISHMENTS

To a great extent this program is built on past accomplishments; some of them have been detailed in the preceeding sections.

The accomplishments can be summarized in three areas:

(1) Developing a model program for three- and four-year-old children and training teachers and assistants to carry out that program. The tables on the next four pages summarize accomplishments in this program, which is funded by the Office of Child Development.

(2) Developing a Parent/Child Toy Library program for parents of three- and four-year-old children and parents of five- and six-year-old children. The course is designed to teach parents how to help their children develop their intellectual ability. The course is built around the use of educational toys and games and requires a two-hour meeting once a week for eight weeks. At the end of that time the parents can continue to use the educational games and the Toy Library as long as they like.

The course for parents of three- and four-year-old children is completed and packaged and it is being utilized. It formed the basis for the competency unit on using games and toys to help children develop the specific skills, learn certain concepts and develop some problem-solving strategies. The development and evaluation is reported in the Report on Development and Evaluation of Parent/Child Toy-Lending Library (Nimnicht et al, 1971).

The course for parents of five- and six-year-old children is currently being field tested. When it is completed in the fall of 1972, it will

TABLE 7

DEVELOPMENT OF TRAINING

1967-68	1968-69	1969-70	1970-71	1971-72
The Laboratory staff worked directly with teachers and assistants The teachers and assistants received: a four day workshop at the be beginning of the school year; a two-day workshop at the end; sixteen inservice training units. The Laboratory staff viewed and critiqued videotapes that teachers made of their own teaching.	The Laboratory staff trained Program Advisors* who in turn trained 10 to 15 teachers and the same number of assistants. The P.A.'s worked with the teachers in the classroom, conducted weekly workshops, viewed and critiqued videotapes that the teachers made. The teachers received learning materials from the Laboratory.	The Laboratory staff trained Program Advisors* who in turn trained 10 to 12 teachers and the same number of assistants. The P.A.'s worked with the teachers in the classroom, and conducted weekly workshops. Only a few P.A.'s had equipment to view and critique videotapes of the teachers' classroom behavior. Some of the teachers received a second year of training. The teachers received training materials from the Laboratory. The training for the teachers and assistants was expanded to include some assistance to improve parent participation in the program.	The Laboratory trained 29 Program Advisors who in turn trained 269 teachers and 269 assistants. The content of the training stressed parent participation, learning episodes and increased use of the videotape equipment. A new emphasis was placed upon the role of the teacher assistant and the training she receives. A new teacher assistant training unit was being tested.	Training for P.A.'s in 5 continuing communities and 2 saturation communities, and a new group of eight Program Advisors who represent the Operational Test communities. Because the Operational Test group is new and the other communities have had a year of training, there are two training groups and workshops are being held every four weeks.
	*P.A.'s had two weeks of training in the summer and three one-week sessions during the year.	*P.A.'s had two weeks of training in the summer and three one-week sessions during the year.	*Program Advisors had two weeks of training in the summer and three one-week sessions during the year.	

TABLE 8

DEVELOPMENT OF MATERIALS

1967-1968	1968-1969	1969-1970	1970-1971	1971-1972
1. 16 inservic raining units incl ng 64 learning episodes; 16 film clips, demonstrating the use of learning episodes; and general papers on such topics as classroom control and language development. 2. A thirty-minute film introducing the model program for children and a fifteen minute film on concept formation.	1. The Introductory film and Concept film. 2. The 16 film clips 3.. The general papers and learning episodes, revised and extended, and published in a book and six pamphlets.* 4. Additional guides for the teachers on curriculum planning, observing children, and increasing parent participation, etc. *The New Nursery School Nimnicht, McAfee, and Meier, General Learning Corporation, 1969.	1. The Introductory film and Concept film. 2. The 16 film clips. 3. The book and pamphlets. 4. Additional papers revising and extending the original concepts. 5. A guide that related the training of the P.A.'s to sequence of training for the teachers and assistants, utilizing the materials that had been developed. 6. A slide set for parents explaining the program. 7. Preliminary development of a Handbook for Teacher Assistants containing learning episodes for use with eight educational toys and games.	1. The Introductory film and Concept film. 2. The film clips. 3. The book and pamphlets. 4. Revision of the training for P.A.'s and teachers into three cycles of training covering one year. Revision of the additional papers, and preliminary production of an Inservice Teacher Training notebook containing the guides and papers. 5. Revision of the Handbook for teacher assistants. 6. A parent participation program using a Toy Library. 7. A first draft of a training program for parent coordinators. 8. An information unit on the model program for children and the training of teachers.	1. Units for using culturally relevant materials in the classroom. a) for Oriental children. b) for Black children c) for Spanish surname children. 2. Final editing and production of the notebook, Inservice Teacher Training in the Use of the Responsive Program. 3. Final production of a unit for teacher assistants. 4. The Introductory film and Concept film. 5. The film clips. 6. The book and pamphlets. 7. The parent participation plan using a Toy Library. 8. The Information Unit.

TABLE 5 -- EVALUATION

1967-1968	1968-1969	1969-1970	1970-1971	1971-72
Major objectives: 1. Test the materials that were being developed. 2. Compare effective on-site inservice training with an eight-week campus program. Results: 1. Materials were generally useful but needed revising. 2. Based on very limited evidence, the inservice program seemed to be as effective as the college-based training. 3. The attitude of the Administrator made a difference in the effectiveness of the training.	Major objectives: 1. Compare the effectiveness of the program with the first year. 2. Evaluate the effectiveness in relationship to the achievement of the children. Results: 1. The program was more effective but two years of training are desirable. 2. Administrative difficulties at the site and inadequate facilities had a negative effect on implementation of the program and on child achievement. 3. Achievement of the child was high according to implementation of the Responsive procedures by the teacher.	Major objectives: 1. Develop better instruments to evaluate the achievement of children. 2. Develop a better observation guide for observing classroom behavior. 3. P.A.'s evaluate training process and materials. Results: 1. Developed instruments to measure child achievement. 2. Developed and refined procedures for systematically observing. 3. Child achievement on PSI, on Responsive Test for small sample, and on Colored Shape Tests for all classes increased favorably. 4. P.A.'s evaluation of training process and materials. 5. Teacher's and teaching assistants' year-end survey responses on their implementation and reactions to the program were favorable. 6. Identification of areas for improvement.	Major objectives: 1. Check effectiveness of P.A.'s in performing responsibilities. 2. Check relationship of child achievement to program variables 3. Relate change of teachers' effectiveness of degree of implementation. 4. Began to develop and refine observation schedule. Results: * 1. Questionnaire survey and P.A.'s time schedule used to collect data. 2. Standardized achievement instruments used to collect data from sample of 39 classes. 3. Rating scale and preliminary observation used to collect data. *All collected data is currently being processed and analyzed.	Major objectives: 1. Continue to refine, develop and field test the observation schedule. 2. Continuing Communities: compare the effects of one and two years of training teachers and assistants. 3. Saturation communities: monitor and report problems and/or solutions associated with efforts involving the Laboratory, to implementing the Responsive Program in a given community. 4. Supporting Communities: collect information on the problems associated with implementation and the degree of satisfaction associated with that implementation over a three year period. 5. Operational Test Communities: determine the necessary support from the Laboratory to implement the Responsive Program.

TABLE 10

NUMBER OF PEOPLE TRAINED

	1967-1968	1968-1969	1969-1970	1970-1971	1971-1972
People Trained					
Program Advisors	-0-	8	20	29	34
Teachers	30	98	209	269	299
Assistants	30	100	209	269	299
Parent Coordinators	-0-	-0-	-0-	5	-0-
Source of Information		Occasional Report #3 Head Start Data 68-69	Summary Statistics (corrected) Head Start Data 69-70		

become the basis for a competency unit on the use of toys and games in the kindergarten and first grade as well as a competency unit on working with parents. Four hours of videotape have been developed as a part of the course for parents and can be used in the two competency units. The Carnegie Corporation has been the major source of support for this program which is now in its third year.

(3) Developing and testing a program for children in kindergarten through the third grade and developing a training system for the teachers and their assistants. This program is a part of the national Follow Through program in the Office of Education.

This program is in its fourth year. The development has proceeded one year at a time from kindergarten through the fourth year. Since the program has just been introduced in the third grade, it is still subject to considerable revising and testing. The process and the methods of introducing the process is further advanced than the adaptation of curriculum and materials in the second and third grades.

Appendix D lists the training materials that have been developed for use in the program and can be used in developing competency units. We have alre mentioned the competency units that are under development in Follow Through.

INSTITUTION DESCRIPTION

A. SUPPORT SERVICES

The Laboratory's Media Services program provides videotape and motion picture production, still photography, graphic arts, media production, inhouse duplication and collating, as well as access to the Government Printing Office in San Francisco. The Utilization Division actively carries out market analysis, demonstration, installation, monitoring, and public information functions for all product development programs.

B. PERSONNEL POLICIES AND STAFF TRAINING

The Laboratory's Manpower Division is responsible for personnel administration, recruitment, staff training, and the monitoring implementation of affirmative action employment policies. (In 1972, 43% of the employees represented ethnic-minority groups.) More than 30 employees are enrolled in experimental courses in educational development, dissemination, and evaluation at local colleges. The Department of Labor sponsors eight on-the-job trainees from the Richmond (Calif.) Concentrated Employment Program.

Each Laboratory employee has a semi-annual work planning conference with his supervisor as well as an annual performance review.

C. POLICY-MAKING, PROGRAM SELECTION, AND REVIEW MECHANISMS

Policies are established by a 26-member Board of Directors representing major educational institutions and agencies in northern California, Nevada and Utah. Five Board members represent community groups and other interests in the San Francisco Bay Area.

Plans for new and ongoing programs are reviewed by a 17-member Executive Panel, composed of members of the Board of Directors, eight members appointed by the Board, and six Laboratory staff members (the Director and five Associate Laboratory Directors). Operational decisions on matters that cut across the various development programs are made by a Laboratory Council composed of the Director and the eight Associate Laboratory Directors who head the separate divisions of the Laboratory. In addition, each Product Development Division has a National Advisory Committee which reviews the work and plans of that Division semi-annually.

The Planning Division is responsible for preparing and revising the Laboratory's long-range plan, the Annual Budget Justification for the Office of Education, and the Quarterly Revisions of Program and Financial Plans. This Division also maintains program and product files for the Laboratory.

D. FISCAL MANAGEMENT

The Administration Division is responsible for fiscal management, contracts and procurement, bidding and proposals, administrative services, and administration of media services. A management information system provides monthly fiscal data at program, component, and activity levels. The Audit Committee of the Board of Directors has appointed Haskins & Sells as the Laboratory's auditors.

E. WORKING RELATIONSHIPS WITH OTHER AGENCIES

The Laboratory was established as a public non-profit organization in 1966 under a Joint Powers Agreement. Present Signatories include the Regents of the University of California, the California State Board of Education, the Trustees of the California State Colleges, the Board of Education of the San Francisco Unified School District, the Board of

Regents of the University of Nevada, the Nevada State Board of Education, the Board of Regents of the University of Utah, and the Utah State Board of Education. Through appointments to the Board of Directors, each of these agencies participates directly in establishing Laboratory policies, and in working with the Laboratory staff. In addition, the Laboratory has developed close working ties with a broad network of state and regional education agencies, local school districts, the educational publishing industry (one of the channels for delivery of completed products), professional organizations, community and parent groups, Head Start and Follow-Through districts, Model Cities agencies, etc. In the dissemination arena, the Laboratory has allied itself with CEMREL, Inc., Northwest Regional Educational Laboratory, and the Wisconsin Research and Development Center in a concerted effort to speed installation and utilization of completed R & D products and processes.

F. LABORATORY GOALS

The Laboratory's overall mission has been characterized as "helping children have more and better opportunities to learn". Its major focus is on the development of educational products that will aid in the process of self-renewal of schools and teacher-training institutions. Each development division seeks to meet educational needs and solve problems within a given area of specification (e.g., teacher education or early childhood education). But various programs with these larger divisions work cooperatively and synergistically with other Laboratory programs outside their own divisions and with other developers in cooperating laboratories, R & D centers, and private research organizations, school districts, and universities to achieve the highest quality for all Laboratory products and to avoid duplication of effort.

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