This Elementary Secondary Education Act Title III Project has been validated as successful, cost-effective, and exportable by the standards and guidelines of the U.S. Office of Education. The Title III Training-Resource Center has developed a systems approach to teacher training and student learning. This is a comprehensive and thorough package for intensive teacher retraining and improved basic curricula in special education. It is designed to meet a variety of needs through diagnostic prescriptive instructional systems grounded at every level in proven principles of learning theory. It includes diagnosis of teacher behavior, as well as student behavior (reading and mathematics and social skills). Thus, it zeroes in on both what skills teachers must acquire to improve learning in the classroom and what skills students need. It then makes proven prescriptions. Finally, it includes the actual provision of the treatment recommended, and in the implementation of the entire model, ways to assure that the treatment is followed and its salutary effects maintained are built in. The system includes two other components: (1) training of regular class teachers by trained special education teachers and (2) training of special students in needed survival skills. (Author/JM)
Project LearnCycle

**An Exemplary Educational Program**

- Individual's prescribed student curriculum
- Individually-prescribed training programs for teachers in
  - responsive teaching
  - performance objectives
  - individualizing reading and math systems
- All categories and ages of special students
- Integration
- Detachable learning components
- Self directing, self-correcting project-developed kits for teachers and students
- Project-developed book *LearnCycle*
- Criterion-referenced objectives and evaluation

**Palisades Park Public Schools**
Dr. George Iannaccone, Superintendent
Palisades Park, New Jersey

**Special Education Region VI**
Dr. William McIvor, Coordinator
Leonia, New Jersey

**Project Directors**
Barbara Pentre and Hilde Weisert

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FSEA. Title III Project LearnCycle has been validated as successful, cost-effective and exportable by the standards and guidelines of the United States Office of Education. The Dissemination Review Panel, U.S.O.E., further approved it for national dissemination.
I. INTRODUCTION

A. Philosophy of the School District

In the words of the School Superintendent Dr. George Iannacone (from the Bulletin issued by the Council for Basic Education, Washington, D. C., Vol. 18, No. 2, October 1973):

"The Palisades Park School System is a system which believes in the rather simple proposition that learners exist along with a body of knowledge, and that when they come together the resulting institution can be called a school. The techniques of gaining this knowledge vary greatly...the technique and the teacher will, it is hoped, expedite the learning process, motivate the learner, and give him skill so that he can continue to learn and so that he can direct his own learning in an organized, disciplined way. With these skills and discipline acquired, he can continue to be a successful learner, in many instances can overcome handicaps, whether they come from the home or the school or society at large...We have a concern for developing initiative and independence, working toward completion of self-set goals, and having teachers teach through a discipline which becomes the learner's pathway to knowledge."

B. Description of Special Education Region VI

Region VI, under the coordination of Dr. William McIvor, is one of seven special education regions established in Bergen County, New Jersey to better service the special student; eleven districts cooperate for optimum utilization of classes, personnel, and funds. Palisades Park, Fort Lee, Bogota, Leonia, Cliffside Park, Ridgefield, and Englewood have participated in this project. Some of the districts are quite small, others large; some reflect small city-suburban environments and multi-racial populations, others do not; all span the gamut of socio-economic status and problems.

Dr. William McIvor is known as an educational pacesetter and has brought to this Region a program of educational leadership and innovation. Most noteworthy has been his system of individualized instructional plans, where teachers report and evaluate objectives and activities in all areas in measurable, performance terms. Accountability is more than a word in this region. In-service workshops led by experts in the field have been one step to put the latest materials and methods into classroom practice. The implementation of the Title III project Learncycle has allowed the Region’s initiatives to be developed and realized in a comprehensive, systematic, replicable way.
II. OVERVIEW AND GOALS OF THE PROJECT

The challenge today in special education is no longer that of finding out what to do or what approach to use. Effective techniques and materials for teaching the exceptional child do exist. Responsive teaching and performance-based individualized instruction have proved dramatically that trained teachers—and other school personnel, and parents—can reach the special child, help him achieve up to his full potential, even reverse the behavioral stream that leads to special placement.

The challenge is to deliver these skills into the hands of on-the-job teachers so that they can learn them quickly, apply them consistently, and continue to use them after the in-service course ends, after the federal project funds run out. After the teacher supervisor goes back to the university.

Learncycle

The Title III Training-Resource Center has developed and is completing final development of a systems approach to teacher training and student learning. In its entirety, the "systems approach" is a comprehensive and thorough package for intensive teacher re-training and improved basic curricula in special education. Effective instructional approaches in special education do exist, but to institute them in classrooms may mean to do nothing less than to change teacher behavior from the ground up. Costs of replicating this program can be compared, not with costs of installing one new piece of curriculum material or one new practice in a classroom, but with costs of a graduate-level training program.

However, unlike most graduate-level training programs, this program (a) has demonstrated results, and (b) includes detachable components for various objectives, which means that other schools can replicate the exact components which deal with their needs.

This program's systems approach is designed, when used in its entirety, to meet a variety of needs through diagnostic-prescriptive instructional systems grounded at every level in proven principles of learning theory. It includes diagnosis, through pre-tests of specific skills, of teacher behavior, as well as student behavior (reading and math and social skills). Thus it zeroes in on just what skills teachers must acquire to improve learning in the classroom—academic learning, through the Individualized Instruction/Performance Objectives component—and social learning and classroom management, through the Responsive Teaching component. And it zeroes in on just what skills students need to read and do math better and faster. It then includes proven prescriptions for both teachers and students. Finally it includes the actual provision of the treatment recommended—materials for student learning or, in the case of replication, inventories. And, in the implementation of the entire model, ways to assure that the treatment is followed and its salutory effects maintained, are built in.

But, in the end goal of special education with potentially normal youngsters, adequate classroom management and instruction and the resulting improved student achievement are not enough. Study after study reports that successful mainstreaming is not inevitable, or even likely, even when the special class has finished its job. Thus, the system developed in this project includes two other components:

1. Training of regular class teachers by trained special education teachers, to equip them to receive and maintain special students;
2. Training of special students in needed survival skills—social skills and self management skills.

For (1) the project has produced a replicable "How to Train Others" workshop package. For (2) the project is completing a replicable kit for students, and a workshop package to show teachers how to use it.

The project was designed to encompass the following elements: (a) bringing performance of special youngsters more into line with their potential by building functional behaviors which would be maintained in non-special environments; (b) individual adaptations of the behavioral approach through equipping trainees with underlying principles rather than a set of memorized skills; (c) a coordinated application of the behavioral approach and increased likelihood of the total educational environment supporting the child's behavior changes, through involvement of all levels of school personnel in direct training or informational workshops; (d) diffusion and continuation of the program in participating districts through training of selected training graduates to train their colleagues; (e) replicability by individuals, groups, systems, through preparation of tested materials and practices.

III. PARTICIPANTS

Eleven school districts, twenty-six special education teachers, fifteen administrators, fifty parents, and almost two hundred special education youngsters have been directly involved in this Title III—funded project which is in its third year of operation. Forty regular classroom teachers have participated in project activities facilitating the mainstreaming process.
IV. SEQUENCE

A. Defining Critical Teaching Skills

Research indicated that two main areas could be defined as forming the core curriculum for training in a systems approach. These areas are:

1. Individualized Instruction Performance Objectives
2. Responsive Teaching

1. Individualized Instruction/Performance Objectives

Most educators are in favor of individualizing instruction but too few training programs define, and too few classrooms demonstrate, the specific, concrete teacher and student behaviors that equal a truly individualized system. The project observed and defined the specific teacher performance, or behaviors, that could be taught and could be observed, applied, and agreed upon as constituting individualization. Examples of these behaviors are:

The teacher
- makes individual diagnoses in each skill area, i.e., makes or selects precise test items for each skill area, administers the test to the student, and administer, before prescribing, determines through diagnosis for each student, (1) objectives, (2) level of functioning, (3) rate of functioning, (4) style of functioning;
- selects specific materials or activities to the diagnosis;
- develops and instructional materials in an individualized fashion for students performing at different rates at different levels, in different objectives where appropriate;
- makes or selects individual progress checks and administers or has the student administer them as prescriptions are completed;
- evaluates and records student progress on objectives and systematically monitors student self-recording.

2. Responsive Teaching

- Examples of some basic skills defined as constituting a responsive teaching system.

The teacher
- identifies the exact student behaviors to work on;
- uses a simple but objective system(s) to record those behaviors;
- identifies the classroom activities or events which can promote, or reinforce, student growth behaviors, and schedules them contingently;
- identifies the classroom activities, events, or teacher responses which promote students' self-defeating behaviors, and removes or alters them.

B. Teacher Training

1. Organization

Special education teachers were organized into three training phases corresponding to the three-year funding of the project. This allowed for step-by-step implementation and evaluation of procedures and techniques on a small-scale demonstration basis, ensuring guaranteed effectiveness for adopters and assessing the program's long-term benefits.

Group I, or the Pilot I group, came from five districts in Bergen County and entered the program in 1972 after the basic training sequence they have maintained and refined their instructional systems over two years, and are now training parents and colleagues in their home districts.

Group II, or the Pilot II group, representing two regional programs, entered the pilot I group in 1973 and have shown continuation of systems over one year.

Group III, the Pilot III group, from five districts, entered the project in 1974 and is replicating the programs and techniques developed in the project's first two years.

This model is based on our information about how people learn and what different kinds of contingencies are required to (1) establish new behavior, (2) maintain recently acquired behaviors, and (3) maintain well-established behaviors; thus there is a different plan of treatment, or training, for each phase. This is a condition which must be dealt with by any program which seeks long-term maintenance of the skills it teaches, and this model will be incorporated into our teacher-training package as recommendations for what districts should do after initial use of the training and curriculum systems to insure continuation. Procedures which are being worked out for the first time in our program will be able to be streamlined for use by other districts.

2. Developing Products and Activities to Accomplish Objectives

After breaking down the major teacher training areas into specific behaviors that could be diagnosed, taught, and evaluated, the project developed training packages and products so that project-trained teachers could begin to train colleagues in their own districts, and so that other districts beyond this area could replicate the program.

Details on these products are given under "Materials and Equipment" in the "Cost Analysis" Section.

C. Parent Training

"In order for schools to be successful, they need the support, concern, and acceptance of the home." —Dr. George Iannacone

Awareness, understanding, and application were the guideposts to sequencing activities for parent involvement in the project. Initially, project presentations made parents aware of innovations in the classes in order that they could understand and advise on objectives and programs. Following this, depending on interest and need, parents could take a short workshop where simple but specific techniques were demonstrated for ameliorating problems in the home which make learning in school more difficult. These workshops have been run by the project directors and in some cases by participating teachers after training.

The project developed and tested a package for parent awareness and training in its first year of operation. This package consists of objectives, agendas, task group activities, filmstrips, books, assignments, and sample home program.

V. ADVISORY COUNCIL

This twelve member board includes local parents, lay people interested in education, as well as the I.E.A. Superintendent, Regional Coordinator, and the County Superintendent for Special Education. The Advisory Council meets during the year to review project activities. The Council has been a sounding board for the program and has served as an important link with the community in fostering acceptance of the atypical student.
I. COST ANALYSIS

Majority of the Title III funding was expended for staff salaries (2 full-time project directors; part-time curriculum associate; 2 paraprofessional training associates) in order to develop products, materials, and in situ personnel that would allow for cost-efficient, effective, replicable systems when funding ended. Because the project is a full-scale systems approach to both teacher training and student learning, cost or adopting districts will depend on the number of components installed.

A. Staff

The project recommends initial training of one or more district personnel as Trainers, people expert in both the concepts and applications of responsive teaching, learning theory, instructional systems, as well as in training techniques and use of the project materials. Length of training would vary with training skills and local objectives, but it is estimated that 10, or 50 hours, would be required from participants. The project has developed a core of teachers equipped to train others in these techniques. When a district has one or more of its staff trained as Trainer Consultants, he or she would spend between 3 and 4 hours per week on initial training activities over one semester. Released time, lunchtime or after school workshops, allow classroom teachers to be trainers as well.

B. Materials & Equipment

1. Learning: a project-developed encyclopedia of behavioral techniques and classroom applications; three different sections, one for teachers, one for paraprofessionals, one for administrators, trainers. Cost: $5.00

2. Individualized Instructional Pathways Kit for Teachers: System of assessing and prescribing for the critical teacher skills in the two content areas, Responsive Teaching and Individualized Instructional Performance Objectives. The Kit includes

2.1 Pre and Post-Tests: for the skills or objectives requisite to classroom implementation of Responsive Teaching and Individualized Instruction. Each test includes a concept level assessment which teachers can take and correct themselves, and an "action level" which requires in-class observation by a trained consultant.

2.2 Teacher Record Forms: Teachers (and/or consultant) check off pre-tests passed, circle skills needed, monitor progress.

2.3 Pathways themselves: the alternative activities for teachers, e.g., viewing a filmstrip, reading an article, doing a project, visiting a demonstration. Teachers do one or more activities until they are ready to take the post-test for the skill.

2.4. Workshop Packages: In Responsive Teaching, the workshop suggested is 18 hours; in Individualized Instruction/Performance Objectives, 6 hours. The workshops provide the means for learning and practicing the common skills which pre-tests show the group needs. The package for replication includes workshop objectives and activities, session by session. The workshop requires a trained leader. The project has equipped local teachers to lead such workshops, and they would be available to school systems wishing to replicate this component. However, where no trained leader is available, Individual Instructional Pathways can be used by teachers themselves to acquire these skills, but the group experience provides motivation and reinforcement not present in a totally self-directing, self-correcting sequence.

2.5 Consultation Guidelines in and out-of-class: In-class consultations are held for the purpose of strengthening new teacher behaviors learned at the concept and performance (can do in role-play situation) level through IIPs and/or the Workshop. These consultations might include immediate feedback on a sequence of teacher-student behavior, modeling by the consultant, or direct instruction through a one-way radio "bug in the ear" on specific procedures. Out-of-Class consultations focus on implementation and integration of principles and new behaviors learned for a comprehensive classroom program. The package for replication includes guidelines for consultants in carrying out these consultations. These procedures are recommended to strengthen behaviors learned through IIP study, but are not indispensable if no trained consultant is available.

2.6 Training-to-Train Package: Objectives, agendas, activities meeting-by-meeting for a 12-session (18 hour)
workshop enabling a district with one trained leader to equip teachers et al who have completed component (1) and/or (2) to teach others—specifically, regular class receiving teachers—what they know, and thus enable them to successfully maintain special education students.

Estimated cost of entire kit: $120.00.

3. Individual Reading & Math Systems: The project has prepared guidelines for the use of commercially available objectives systems expanded and adapted for the needs (and limited budget) of the special class. "Coding in" of commonly available materials reduces costs of new materials, which can be absorbed within an average special class budget over three years, or over one year for several classes cooperatively. Estimated cost of guidelines, project-developed objectives, codings, and inventories: under $20.

4. Social Skills Kit: (a survival kit for kids in school): an individualized social curriculum that teaches coping skills to the special student returning to the regular classroom. Includes comic book, group game, target record sheets, wrist counters. Estimated cost: $150.00.

C. Facilities

No special facilities, renovation, or remodelling are necessary. Reading and/or Math Systems, if adopted, can be set up in as small a space as half a standard-sized classroom, and can service up to four classes. As the Validation Team stated, "Costs in the project are low; benefits to children and the home, high."

VII. RESULTS

A. Achievement Gains Regardless of Label

In the first two years of the project, students of a variety of classifications and ages showed significant gains in reading and math, improving at rates similar to their peers in the mainstream. Gains of those students with primarily "func-
B. More Involvement in Learning

Recent studies (Bloom, 1974; Conant, 1974) suggest that, even in "normal" classrooms, time students spend in real learning is not much more than half the school day; that was borne out in the data from the semester before teachers applied the methods and systems learned through this project (Group II and II'). Group I, previously trained, applied their training all year. The dramatic improvement in Group II was not a simple effect of maturation; for comparable classes (Group II') where teachers did not participate in training, showed no change in the participation ratio.

These data also suggest that "disturbed" "socially maladjusted," "neurologically" or "perceptually impaired" youngsters can reduce significantly the frequency of the behaviors which led to their labelling, and increase significantly the frequency of the behaviors needed to learn and succeed in school.

CLASS PARTICIPATION RATIOS:
% of time Students "ON TASK" Working on Assignment During Academic Periods

<table>
<thead>
<tr>
<th>PERCENT</th>
<th>100</th>
</tr>
</thead>
<tbody>
<tr>
<td>USE OF CURRICULUM SYSTEMS</td>
<td>71.07</td>
</tr>
<tr>
<td>&amp; USE OF BEHAVIOR DEVELOPMENT ALL YEAR</td>
<td>54.16</td>
</tr>
<tr>
<td>TRAINING IN</td>
<td>50.94</td>
</tr>
<tr>
<td>TRAD'LY</td>
<td>1'SEM 2'SEM</td>
</tr>
<tr>
<td>USE OF CURRICULUM SYSTEMS ALL YEAR</td>
<td>TREATMENT GROUP I</td>
</tr>
<tr>
<td>(1973-74) 6 classes</td>
<td>(1973-74) 5 classes</td>
</tr>
</tbody>
</table>

\[ p < .01 \text{ in 4 out of 5} \]
C. Greater Return to Mainstream

As these graphs show, the incidence of integration, either totally or for some subjects, changed substantially when teachers participated in the program. Although long-term effects can only be assessed over time, the figures so far are encouraging.

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**Project Data**

- Level of funding:
  - 1972-73: $58,000
  - 1973-74: $58,000
  - 1974-75: $74,000

- Staff:
  - Full-time:
    - 2 Project directors
  - Part-time:
    - 1 Clerk-typist
    - 1 Curriculum associate
    - 2 Training associates

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