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ABSTRACT
                A review is provided of the learning laboratory
concept as it is being implemented in the Ohio Adult Basic Education
Program. Seating, scheduling, budgeting, and related details are
considered first, followed by laboratory coordinators and supportive
staff members, the use of programed instruction, selection of
programed materials, student orientation and placement,
recordkeeping, and general advice on how to assure program success.
Four references are included. (ly)

The Learning Laboratory in Adult Basic Education

State of Ohio
Department of Education

Columbus, Ohio   1969

The
Learning
Laboratory
in Adult Basic Education

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The Learning Laboratory
in
Adult Basic Education

Many administrators of Ohio Adult Basic Education programs, in an effort to provide optimal opportunities to students who have less than an eighth-grade education or its functional equivalency, are currently developing imaginative approaches for program improvement. One approach has been the development of learning laboratories in which self-instructional techniques are used.

A learning laboratory contains an accumulation of commercially available or locally constructed programmed and self-instructional materials, which provide an educational program designed to meet adult objectives, needs, and abilities. A coordinator, as the person in charge of a learning laboratory is called, has responsibilities more encompassing than those of a teacher in the traditional classroom.

Several factors differentiate the learning laboratory from traditional classroom teaching. Among these factors are . . .

—the highly individualized program designed for each adult learner.

—the flexible schedule possible for each student.

—the role played by the learning laboratory coordinator.

An effort has been made in this publication to provide an overview of the learning laboratory concept as it is being implemented in the Ohio Adult Basic Education Program. Hopefully, the information will be of value to program directors, to learning laboratory coordinators who are currently operating learning laboratories, to persons interested in establishing learning laboratories, and to teachers who utilize programmed materials in the traditional classroom.

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The Laboratory

Ideally, a separate room should be set aside for fulltime use, particularly since many learning laboratories are open during the day as well as the evening. Such a room should have sufficient shelving for all regularly used instructional materials. Storage space should be provided for equipment and more costly materials.

If a separate room is not available, a suitable alternate should be found. For example, a school library usually lends itself to the learning laboratory concept better than a regular classroom. A high school or junior high classroom with large desks is preferable to an elementary classroom. Within a secondary school, adults may feel more at ease in an industrial arts or home economics room than in another type of classroom. If suitable space is not available within a school building, other community resources should be considered. In many instances, community agencies or private businesses are most willing to provide space.

The number of adults that can meet in a laboratory is determined by the space available, the number of hours the laboratory is open, the availability of aides, the experience of the coordinator or coordinators, and the funds available.

Seating

A well-equipped learning laboratory should allow for individual preference by providing both carrels and tables for student use. An adult often prefers a carrel because it affords a better opportunity for concentration without distraction. Also, a beginning student may prefer the privacy of a carrel in order to use a wider range of materials. Another advantage of carrels is that they are especially suitable for certain kinds of equipment designed for use with programmed materials. Because of the space required for the use of various materials, tables are superior to desks, and in some cases are superior to carrels.

The coordinator's desk, or primary work area, should be positioned to provide a clear view of as many student areas as possible.

Organizing Materials

Instructional materials should be systematically organized for easy student access. A recommended system--if the physical setting of the room permits—is arranging all materials alphabetically by subject areas. Programs placed in each subject area location should be internally positioned according to reading level, progressing from the most basic to the most advanced levels.

If materials and equipment cannot be stored in the room used as a learning laboratory, portable carts can be obtained or constructed for storage and transportation purposes. With carts, materials can be used in several locations within a building and can be readily moved to facilities outside the public school.

Scheduling

Ideally, learning laboratories should be in operation at least ten to twelve hours daily, with hours of 9:00 a.m. to 9:00 p.m. being desirable. Students should spend a minimum of two to four hours a week in the laboratory, but may work

as many additional hours as they desire. Students enrolled in a full-day learning laboratory program do not experience scheduling problems due to irregular working hours, baby sitting difficulties, or the many other problems that cause sporadic attendance or separation from the traditional Adult Basic Education program.

If budget or staff limitations preclude the ability to implement a full-time laboratory, other options exist. One possibility is a part-time laboratory that is open four evenings per week. Another consideration is keeping the laboratory open through the day and the evening with responsibilities shared by two coordinators and one or more aides.

A laboratory, which is open ten to twelve hours a day, staffed by a full-time coordinator and aide, can effectively serve one hundred fifty or more students. The work schedule can be arranged so that either the coordinator or aide is available at all times. A part-time laboratory open four evenings per week, staffed by a coordinator, working alone, can serve an enrollment of fifty or more students.

Budgeting

Costs for the operation of a laboratory vary with the number of hours it is open, local salary schedules, the number of adults to be served, and the instructional materials required.

Experience has shown that the cost of operating a learning laboratory compares favorably with the operating costs of a traditional classroom. This is primarily because of the difference in the number of students that can be served in the two settings. Joe Carter, Director of Learning Laboratories in North Carolina, states, "The cost per student contact hour can be significantly reduced in the setting of a learning laboratory as compared with the cost of a traditional classroom."

The Coordinator

The key to the development of a successful learning laboratory in Adult Basic Education lies in the careful selection and training of the coordinator. The quality of performance by the coordinator spells the difference between success or failure.

A Successful Teacher and More!

To be successful, the coordinator should be . . .

—experienced in counseling techniques.

—knowledgeable in self-instructional techniques.

—familiar with the needs of adult learners.

—well organized and adaptable.

—able to solve educational problems and make related decisions.

Adult students, in many instances, are sensitive about educational needs, economic status, race, sex, and age. Therefore a person selected as a learning laboratory coordinator must be able to . . .

—make each student feel accepted.

—help the student overcome obstacles encountered in his educational program.

—handle referrals to other agencies, when necessary.

—make recommendations for job placement, vocational training, or other schooling.

First Assignment

When a coordinator first receives a learning laboratory assignment, he should be allowed time to become thoroughly familiar with all materials to be used under his direction. Until he becomes acquainted with programming techniques and feels at ease with them, he should not introduce materials to students. Actual completion of all programs, frame by frame, and study of the various manuals and references are the best methods of familiarization. See page 28 for suggested reference materials.

Pre-service and in-service training for coordinators can provide valuable instruction in the use of programmed materials and related areas such as student placement or techniques of self instruction. Publishers are often quite willing to send consultants to provide training. Experienced coordinators can explain how particular materials can be used in actual learning situations. Visits to nearby learning laboratories and attendance of in-service meetings conducted by other school districts may be helpful.

The Coordinator's Role

The traditional role of the teacher changes with the laboratory approach to learning. With traditional instruction, primary interaction takes place between the student and the teacher. In the learning laboratory, the primary interaction is between the student and the programmed materials, with the coordinator functioning as a facilitator of learning. As a facilitator, the coordinator brings together the student and the information to be learned . . .

—by placing the student in a program where he will be successful.

—by serving as a resource person when the student has questions or experiences difficulty.

—by evaluating periodic tests as they are presented in the program.

A coordinator's function as a counselor begins with the initial interview with each student to be assigned to the learning laboratory. At that time, the student should be helped to clarify his objectives. A realistic schedule of time the student will spend in the laboratory should be established. Gains that can be expected within various periods of time should be projected. A skillful coordinator, acting in a counselor role, often helps the student to rephrase generally stated objectives into specific terms and then helps the student set reasonably attainable short-term goals. Long-range satisfaction with achievement is the likely result.

In a learning laboratory, the coordinator is relieved of the time-consuming tasks of presenting information, supervising group activities, and checking students' routine work. He is free to devote time to activities that supplement the basic concepts presented by programmed materials. He has time to help individuals and small groups meet selected educational needs. Thus, a learning laboratory setting, rather than becoming dehumanizing and impersonal, presents a coordinator with increased opportunities for individual interpersonal relationships with students. The extent to which these relationships grow depends largely on the interests and efforts of the coordinator.

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Meeting the Needs of Pupils

A teacher faced with the needs of a number of pupils, each of them working at his optimum rate, is challenged to apply effective, personalized tutorial assistance to each pupil at the point where the learner actually is—not at the point where he might or should be. With the aid of the learning program, the teacher can devote a much larger part of his time to counseling, guiding, assisting, and stimulating the individual learners. In reflecting on these possibilities, Harry Broudy has commented: "If the teacher is a source of non-standardized insights; if the teacher is creative enough to produce a highly personal reaction to the world and to the subjects he teaches, then he is a valuable asset and not a machine at all." The implication is clear. If certain classroom tasks can be accomplished by a machine, then they should be done by the machine, and not by the human being. The human being, the classroom teacher, should do those things the machine cannot do. In the process, teacher, learner, and learning all will benefit.

From Lysaught and William's
Guide to Programmed Instruction.

Supportive Staff

Supportive personnel who can make significant contributions to the success of a laboratory include aides, counselors, recruiters, and curriculum specialists. While the support of all listed personnel can be quite valuable, employment of an aide to assist each coordinator should be given high priority.

Recruitment of Aides

Individuals presently working as aides in learning laboratories, or who might be recruited to work as aides, come from a variety of backgrounds. These include housewives, part-time college students, trainees in vocational education programs, and "graduates" of Adult Basic Education programs.

Qualifications of Aides

Unless an exception is made because a person is in a special training program or is a learning center "graduate," each aide should have a high school diploma or a reasonable equivalent. Other qualifications to seek include interest in working with undereducated adults; ability to speak, read, and write standard English; ability to follow directions and carry tasks to completion; and positive personal characteristics.

Training of Aides

Systematic training of aides is essential. The type of training, however, will vary from district to district, depending on the number of aides and their experience backgrounds.

Responsibilities of Aides

All services performed by aides must be non-instructional. This limitation does not minimize their potential value; instead, it provides coordinators with the challenge of devoting full time to professional duties. Services an aide may perform include . . .

—filing and cataloging materials in appropriate locations.

—assisting in the operation of audiovisual equipment.

—helping students in the use of programmed materials.

—maintaining individual student records and files.

Programmed Instruction

Of the various instructional materials to choose from for use in learning laboratories, programmed materials have been the most prevalent and most effective.

The "What" of Programmed Instruction

Programmed learning is a procedure of self instruction in which concepts to be learned are presented to individual learners in small units that are organized in a logical, cumulative sequence. Each learner uses specially prepared programmed materials that leads him through a series of specific understandings designed to communicate the desired information to him.

Information can be programmed in a variety of ways. Reusable books, consumable books, filmstrips, inserts for teaching machines, and still pictures are the most commonly used media. Equipment, ranging in cost from a few dollars to thousands of dollars, can make substantial contributions to programmed learning. As a general rule, however, commercially prepared soft-cover booklets are found to be very effective and practical, particularly since concepts can be presented in small self-contained packages at minimal cost.

To be programmed, information must be broken into specific concepts and presented to the learner in individual units, called *frames*. A frame consists of a picture, a sentence, a paragraph, an equation, or a formula and a pupil-response item. The first part of the frame should contain a single idea; the second portion should require the student to respond in a manner that indicates he understood what he saw or read within the frame. A question may have to be answered, a blank filled in, or a problem solved. Whatever the form of the concept and the required response, frames must be organized sequentially and cumulatively.

Programmed learning is based on the theory of reinforcement. Essential to this theory is the assumption that an individual can learn by observing the consequences of his own actions. When a learner makes a correct response, he is reinforced by the knowledge that the response is correct. Furthermore, this reinforcement is strengthened by the fact that it immediately follows the correct response and that this reinforcement is repeated in the conceptual development set forth in the following frame.

Self-instruction is possible because the learner, if placed at the proper level in well-developed programmed materials, meets instant and continued success. This success reinforces the learner and motivates him to continue with the program. The learner, aware that he is learning, regards his learning experiences as enjoyable. For an adult whose previous formal educational experiences provided only frustration and failure, immediate success is essential if he is to continue in an educational program.

The planned procedures inherent in programmed materials not only make individualized instruction possible but practical. Specific objectives can be achieved; errors and frustrations can be reduced; and student motivation can be increased. Goals that once seemed impossible can be attained in remarkably short periods of time.

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PROGRAMMED INSTRUCTION

FRAME		ANSWERS
1	You have enrolled in a class in which you will learn your subject by using the very latest teaching method. This new method is called **programmed instruction**. Cover the words at the right and continue with Frame 2.	
2	Materials used in **programmed** _____ are either textbooks, teaching machines, taped lessons, or picture series. Continue with Frame 3.	instruction
3	_____ **instruction** continually explains, reviews, and questions you about your specific subject.	Programmed
4	By taking one short step at a time, you build your understanding of your _____.	subject
5	Programmed _____ begins with the simple and easy steps in your subject and proceeds slowly to the difficult steps.	instruction
6	At each brief _____ in your program, you will receive a short message. You will be asked to use that information to answer a question or fill in a missing word.	step
7	Little by little your knowledge of your _____ will grow. You will have helpful guidelines to follow and you will be studying at a speed you like.	subject
8	There are definite _____ for using programmed materials that will enable you to learn and to remember what you want to know.	guidelines

Continue with Frame 9 on the following page.

The "Why" of Programmed Instruction

Programmed instruction has many advantages for use with students enrolled in Adult Basic Education learning laboratories. Small learning steps, active responding, immediate reinforcement, self-pacing, and progress tests are but a few advantages.

When using programmed materials, each individual can proceed at his own level of competence and learn successfully at his own rate. Since each learner works at his optimal functional level and sets his own pace, frustration is reduced. Individual needs are met on a variety of levels—educational, social, and psychological.

Scheduling is flexible. A student's progress will not be affected by how often he can come to the laboratory or by how long he can stay.

Periodic checks of progress and achievement are built into programmed materials. Methods for maintaining records of learning experiences are included. These techniques, which enforce student awareness of daily and weekly progress, are immediate and self-administered. No time is lost when the coordinator spends time with another student. Furthermore, no student needs to face embarrassment through fellow students awareness of his problems in skill mastery.

The coordinator in the learning laboratory has more freedom. Instead of instructing all students together in a lock-step manner, he is truly able to give attention to individual students and to plan educational programs to meet their needs and goals.

The Selection
of Programmed Materials

Programmed learning materials to be used in learning laboratories should be selected on the basis of the contribution they can make to the educational objectives of the local Adult Basic Education Program and on their appropriateness for adult use. Soundness of programming technique, clarity of concept presentations, and depth of student-response items should be studied carefully before any materials are purchased.

A good manual should accompany any set of worthwhile programmed materials. It should be logically organized, concise, and readily understood by any coordinator using the materials. Manual content should include . . .

—an overview of the program, its purpose, and its anticipated effectiveness.

—a listing of skills developed.

—a description of the materials and how they are to be used.

—student-placement procedures.

—a method for introducing students to the materials.

—practical ideas for learning laboratory or classroom use.

—suggestions related to testing and evaluation.

—an explanation of student and coordinator record-keeping systems.

Other information about each set of programmed materials that may be available includes . . .

—the scope and sequence of the entire instructional program.

—description of field testing and pertinent test data.

—concrete evidence of past effectiveness with adult learners.

—rationale for tests used to assess student progress.

—practicality (cost, durability of nonconsumable items, etc.).

An evaluation checklist, similar to the example on the following page can be developed to fit local selection criteria.

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ADULT BASIC EDUCATION

CHECKLIST FOR EVALUATING PROGRAMMED MATERIALS

Program or program component evaluated_____

Evaluator_____ Date_____

Category — Quality Rating	Excellent	Good	Satisfactory	Poor	Unsatisfactory

Preliminary Information
Completeness of package—student materials, testing system, record keeping methods, teacher's manual . . . .
Quality of package—organization, design, art, printing, filming, etc. . . . .
Indicators of effectiveness for adults—author competence, reviews by curriculum specialists, opinions of teachers . . . .
Cost in relation to available funds . . . .

Program Content
Interest to adults . . . .
Appropriateness of vocabulary . . . .
Clarity of writing style . . . .
Supportive content—previews, reviews, pretests, quizzes, tests . . . .
Suggestions for enrichment activities . . . .

Concept Presentation
Sequential introduction of ideas . . . .
Single new idea within each frame . . . .
Spiraling of previously presented ideas . . . .
Sequence that leads toward objectives . . . .
Sequence suitability, content, difficulty, etc. . . . .
Variation in presentation mode (interesting, not confusing) . . . .
Pictures, diagrams, and tables as needed . . . .

Student-Response Items
Well chosen questions, fill-in-the-blank sentences, and problems . . . .
Clearly written response items . . . .
Variety in types of response items . . . .
Relevant responses called for . . . .
Appropriate number of response items (not too many per frame) . . . .
Appropriate cueing (not too simplified or repetitious) . . .
Provision for response errors and concept clarification . . .
Ease with which a student can check his responses . . . . .

Sample checklist for evaluating programmed materials.

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The Adult Student

As a part of his initial contact with a coordinator, each prospective student is introduced to the laboratory, given diagnostic tests, and helped to clarify his educational goals. After test results have been analyzed, the coordinator places the student in an educational program designed to meet the student's specific goals and educational needs. The adult student then works at his own pace and at his own level of ability.

Collecting Basic Information

Each student should be interviewed, counseled, and tested individually before being placed in a program. Preferably, student-coordinator interviews should be scheduled on an individual basis. Arrangements are best if made by phone, or in person, so that a mutually agreed time can be established.

During the initial interview, the coordinator—not the prospective student—should complete a locally developed basic information form similar to the example shown on the following page. The reverse side of the form could be used for recording test data and placement recommendations. (See the sample form on page 24.)

ADULT BASIC EDUCATION
STUDENT INFORMATION CARD

Personal Data

Name_____
         Last   Middle   First

Address_____
         Street   City   State   Zip

Phone_____ Age_____ Date of birth_____

Birthplace_____
         City or County   State

_____Single   _____Citizen_____Yes_____No
_____Married   _____Separated
_____Divorced   _____Widow/er
Spouse's Name_____
                              Number of children_____

Work Experiences

Present job_____

Previous jobs_____ Firm_____
                _____ Firm_____

Other (specify)_____

Education

Years completed   1   2   3   4   5   6   7   8   9   10   11   12

Native Language_____

Grade school attended_____ Year of last schooling_____

Junior high attended_____ Address_____

High school attended_____ Address_____

Subject-Area Interests   Address_____

_____Arithmetic
_____English   _____Reading (general)
_____Health   _____Reading (speed)   _____Science
Interviewer Comments   _____Reading (understanding)   _____Social studies
                                              _____Spelling

Interviewer_____

_____ Date_____

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Explaining the Laboratory and the Program

Depending on the amount of time the prospective student can spend during his initial interview with the coordinator, possible areas beyond completion of the basic information form that could be covered include:

· A simplified explanation of programmed learning and how it differs from traditional classroom instruction.

· A short tour of the laboratory, which may include demonstrations of materials and equipment.

· Discussion of a realistic commitment of hours per week to be spent in the laboratory.

> Caution must be exercised that the time commitment is realistic. Some adults are overly enthusiastic and plan without allowing for responsibility to home, family, and employer. Others may desire a minimum number of hours below that time thought to be essential for progress. A minimum of two to four hours a week, or of two hours per program per week, should be spent in the laboratory.

· Clarification of student needs and goals.

· Explanation of testing and placement procedures.

> Prepare the student for diagnostic testing in a manner that does not frighten him. Be sure he knows that testing assists in making proper placement that helps to insure success in accomplishing goals. If the student is willing and has time to stay, give him one test—perhaps reading—even though it is his initial visit.

· Establishment of good student-coordinator rapport.

Placing the Student

Immediately after a student has been interviewed and his goals have been clarified, a program should be prescribed that will meet the student where he is and lead him toward his

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goals. Diagnostic testing needed for placement purposes should be completed as soon as possible. Reading and mathematics tests should be included. If a reading level of sixth grade or above is established, testing in English grammar is also recommended. Various commercially produced tests suitable for use with adult students are available. In some cases, test scores are correlated with student placement recommendations for specific instructional programs.

Initial student placement usually should be in reading or English. A second subject can be added later, when the student has made sufficient progress in the first program. Few students should initially work on more than one program at a time, or ever work on more than two programs concurrently.

After a program is prescribed, the final choice of the course should be up to the student. If a student is reluctant to try a recommended program, he should—if possible—be allowed to try an alternate program of his choice. In either case, the coordinator should periodically check student progress and recommend any needed changes in program placement.

Placement should be on a level where the student can maintain an eighty-five percent or better level of efficiency. If doubt exists as to initial placement, the coordinator should advise a lower level where the student can be successful rather than a higher level where frustration may result. Ideal placement should challenge the student, not bore him. He should be kept on a level that will promote maximum motivation and learning.

Although students can learn through the use of programmed materials at almost every level of educational proficiency, students testing at the third-grade level or below in reading may experience problems in using programmed instruction. Students who are functionally or totally illiterate may need small group or individual instruction in phonics and other basic reading skills before moving into programmed materials.

Records

Various records will need to be developed to keep inventory of available programs, to chart enrollment and schedules, and to help students keep track of their progress.

Since the types of records to be used and the specific information to be included will vary from district to district, the samples included in this section are for illustration purposes only and, if used, should be modified as necessary for local needs.

Sample time sheet with simulated responses. Could be used on a clipboard or posted on a bulletin board.

ADULT BASIC EDUCATION
PROGRAMS AVAILABLE IN OUR LEARNING LABORATORY

Subject	Program / Reading Level	Beginning 1	Beginning 2	Beginning 3	Intermediate 4	Intermediate 5	Intermediate 6	Advanced 7	Advanced 8
Reading	Kit XYZ—Books	1 2	3 4 5	6 7	8 9 10	11 12	13 14 15	16 17	18 19 20
	Listening Tapes		A	B	C	D	E	F	G
	ABC Filmstrips	A	B	C	D	E	F	G	H
Spelling	Tape Kit		1		2	3	4	5	6
English	Language Programs							G	H
	Card Set					Program I		Program II	
Arithmetic	Practical Math	1	2	White 3	Red 4	Blue 5	Green 6	7	8
	Filmstrips	A-1 S-1	A-2 S-2 S-3	M-1 M-2 N-1	M-3 D-1 D-2	D-3 F-1 F-2	P-1	P-2	P-3
	Consumer Math								
Social Studies	Geography				Money	Buying	Paying	Taxes	
	History			A	B	C	D	E	
	Government			1	2	3	4	5	
								I	II

Sample chart listing programs available in a particular laboratory. Could be used as a wall chart or a mimeographed sheet for student notebooks.

ADULT BASIC EDUCATION
PROGRAM COMPLETION RECORD (1968-69)

Program _____

Name _____ Date completed _____

Date started _____

Number of frames in the complete program _____

Instructions: Keep this sheet in your notebook until you finish the program listed above. Notice that it shows the months and days the laboratory will be open.

Each time you work frames of the program, *write the number of the last frame completed.*

After you complete the program, give this record to the coordinator.

Month / Date	Oct.	Nov.	Dec.	Jan.	Feb.	March	April
					Sat.	Sat.	
			Sun.	Vac.	Sun.	Sun.	
1		Sat.					
2		Sun.					
3							
				Vac.			
28				Vac.			
29			Sat.	Vac.			
30				Vac.			
31							

Sample form to be used by the student to record progress in a particular program. Designed for student notebooks.

ADULT BASIC EDUCATION
PROGRAM TIME CARD

Date Started _____

Name _____

Program (Use one card per program.) _____

Date	Start Time	Finish Time	Hours Worked	Last Frame Completed

Over.

ADULT BASIC EDUCATION
PROGRAM TEST RESULTS

Name _____

Program (Use one card per program.) _____

Type of Test (Pretest, Progress, Post-Test, etc.)	Date	Score	My Opinion of Results (Good, Fair, etc.)

Over.

Sample card for recording both
program progress and test results.
Designed for use on index cards.

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Sample card for recording pertinent information about a student's enrollment and his progress. Designed for coordinator use as a cumulative record.

ADULT BASIC EDUCATION
STUDENT RECORD CARD

Name_____ Phone_____

Last   First   Middle

Key Dates

Initial Interview_____

Diagnostic Testing_____

Initial Admission_____

Withdrawal_____

Readmission_____

Advanced Level Completed_____

Initial Placement

Reading_____ English_____ Mathematics_____

Test Results

PRE-TESTS				POST-TESTS			
Date	Test	Score	Program Implication	Date	Test	Score	Program Implication

Program Prescriptions

Start Date	Prescribed Programs		Comments	End Date

Other

(Non-programmed prescriptions; notes on interests, scheduling problems, attendance, or health; etc.)

_____

_____

_____

_____

Coordinator_____

Do's and Don'ts

The learning laboratory approach with its concentration on programmed learning is not a panacea for Adult Basic Education Programs. A realistic appraisal indicates that programmed learning should be approached with the optimism that is essential for success, but with full awareness of potential trouble spots and possible disadvantages.

With careful planning and preparation, programmed learning can be successful. Without proper planning and preparation, lack of success can almost be guaranteed.

Keys to Success

The school district planning to initiate the learning laboratory concept into its Adult Basic Education Program or needing to evaluate its on-going learning laboratory activities should find the following suggestions helpful:

—a separate room—or a suitable alternate such as a library, an industrial arts or home economics room, or a classroom with adult-size desks—should be available for use as a learning laboratory.

—storage areas and shelving, both with easy access, should be available for instructional materials and equipment.

—programmed materials, and related equipment, should be carefully selected on the basis of the contribution they can make to the educational objectives of the local program and on their appropriateness for adult use.

—materials should be shelved or stored in an organized manner, preferably arranged by subject areas and internally organized by reading levels.

—each coordinator should be carefully selected and, before being assigned students, be assisted in understanding the needs of adult learners and allowed sufficient time for familarization with available programs.

—coordinators should have pre-service and in-service training.

—students should be interviewed, tested, and counseled individually and introduced to the learning center one at a time.

—initial student contact should include completion of a basic information form, clarification of student goals, discussion of programmed learning concepts, and arrangements for diagnostic testing and program placement.

—accurate student placement is essential. Students should initially be placed in one program only (usually reading or English), with a second program added later—when student ability merits.

—program assignment should be at a level where the student will achieve with eighty-five percent or better proficiency.

—students who are functionally or totally illiterate (perhaps those testing below the third-grade level in reading) may require small group or individual instruction in phonics and other basic reading skills before being assigned programmed materials.

—systems for necessary records should be developed and current files should be maintained for each student.
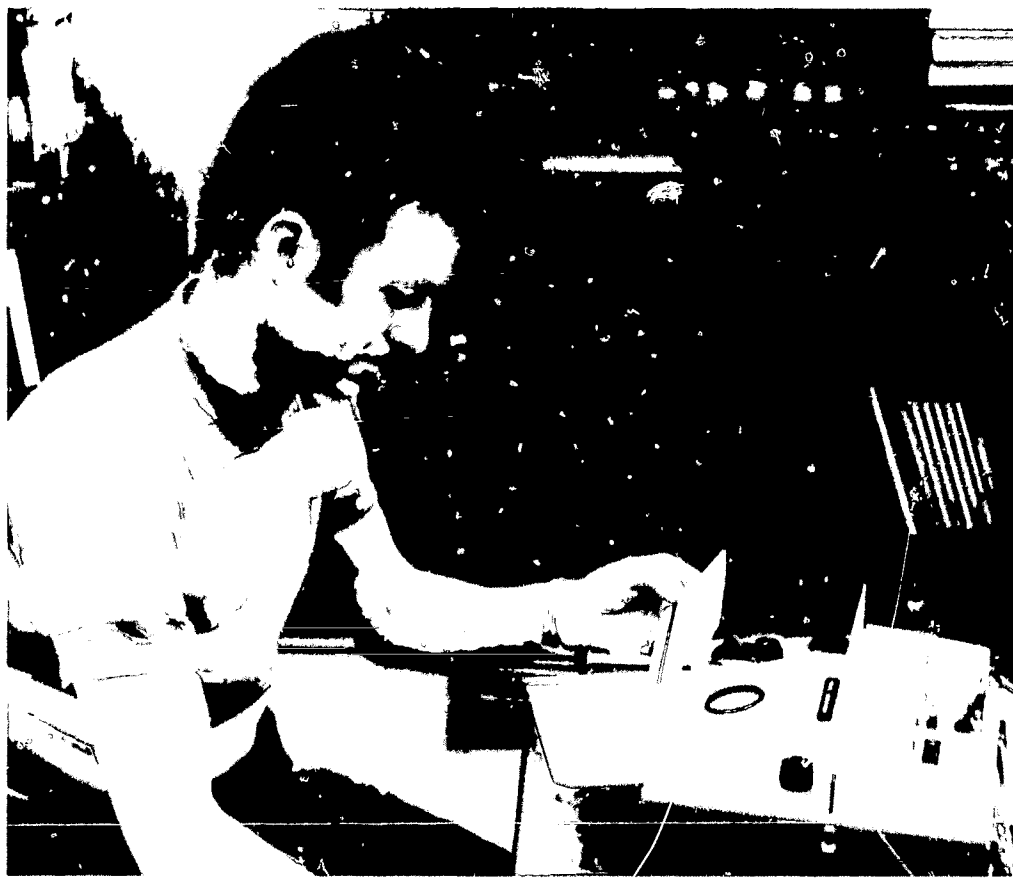
Result—
Failure If......

If a district does not adhere to the preceding keys to success, the learning laboratory approach to Adult Basic Education programming is likely to result in failure, particularly if . . .

—a wide selection of programs (three or more, if possible) is not available—programs that present similar concepts on the same reading level, that present similar concepts at various reading levels, and that are written by different authors so that student learning style and progress can be matched to author teaching style.

—a supervisor hands his coordinators programmed materials and expects them to proceed without a knowledge of programmed learning and self-instructional techniques.

—the coordinator does not have a thorough knowledge of the total curriculum, of specific instructional objectives, and of the role of programmed learning in meeting program objectives.

—the programmed materials are poorly written or inappropriate and the coordinator is not aware of the problems because he did not work the pupil-response exercises himself.

—the coordinator has not determined the prerequisite skills a student needs before being assigned to a particular program.

—the student is not oriented properly to programmed learning—how it differs from traditional learning; what the learner must give to the program; and what he can expect.

—the reading level of the program is not compatible with the reading level of the student using it.

—each student in a class is lock-stepped through a set of programmed materials, doing every frame whether he needs the information or not.

—a student uses programmed materials exclusively with no human interaction.

References

The selected publications listed below may prove helpful to administrators and teachers using, or contemplating using, programmed learning in Adult Basic Education programs.

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