To acquaint teachers of adult literacy with the special needs of adult learners, a series of computerized case studies was developed as part of three teacher training courses. The first course sensitized teachers to the learning problems of certain target populations; the second introduced diagnostic and prescriptive teaching techniques; and the third familiarized teachers with existing materials and suggested techniques for developing additional materials. Participants tested their skills by using interactive, computerized case simulations. (EMH)
"Training Teachers in the Area of Adult Literacy: A Case Study Approach"

The Problem

There is presently in the United States a growing need for teachers in the adult literacy field. A vast number of Americans fall below the level of literacy needed to function in a modern technological society. A Federally commissioned study puts the functional illiteracy rate at about 20%. The 1970 census shows 54 1/2 million persons aged 16 years and over with less than a high school education and not presently enrolled in school.

In 1971 federal and state expenditures to combat the illiteracy problem rose above $55 million. Expenditures over the last five years have gradually increased and in all probability will continue to do so. In most states the public schools have taken the lead in running both day and evening classes for adults functioning at below an eighth grade level of school achievement. Since 1966 the Adult Education Act has provided federal funds for this purpose. Even before 1966 some states such as Minnesota had begun funding their own programs.

Developing a single training program for teachers in the adult literacy field is difficult because literacy training takes place in many varied contexts. Public schools are only one agency among many concerned with the adult illiterate. Correctional institutions give literacy training. According to the American Bar Association about 50% of all inmates are functionally illiterate. Manpower training programs find it necessary to teach trainees to read before they can teach them a vocational skill. The armed forces have their own programs to raise the reading level of recruits. Vocational schools and community colleges have found it necessary to have reading and study skill centers to raise the reading levels of their students. Many private volunteer agencies such as Literacy Volunteers and the Laubach Literacy Program train volunteer tutors to work on a one-to-one basis.

The majority of literacy programs are small and are staffed by part time teachers. Although many of the teachers, particularly in the public school programs, have many years of experience few have any formal training in teaching adults as such. A recent survey by the University of Minnesota showed that most states require only an elementary or secondary teaching certificate in order to qualify as teachers of adults. Some states have no

1 The Adult Performance Level Study, Horville Northcutt, Austin, Texas 1976
3 Literacy: Problems and Solutions, A Resource Handbook for Correctional Clearinghouse for Offender Literacy Programs, ABE 1975
formal requirements at all.

To meet the need for a qualified and effective teacher corps in the area of Adult Literacy the Federal Government underwrote a major staff development effort funded through 309b funds of the 1956 Adult Education Act. Most of this effort was directed towards inservice workshops throughout the ten regions. In Minnesota funds were directed towards developing courses at the University of Minnesota to train teachers in Adult Basic Education (i.e. basic reading and math skills below grade eight level).

Both the workshop and the college course models of teacher training have their drawbacks. Workshops are "one shot deals" and give a three day boost to expertise, but in the time allotted they cannot provide the depth or the followup necessary for effective teacher and paraprofessional training. College courses are tied to one spot. Correctional educators, public school teachers working in evening programs, and teachers in areas distant from the University cannot always afford the time to come into the University on a regular basis.

The Training

At the University of Minnesota, I have been working towards a model of teacher training that will take advantage of the fact that most high schools throughout the state of Minnesota are equipped with relatively simple teletype computers. (Recently the LEAA has sponsored a series of projects to bring computer aided instruction into correctional settings). Computer programs can bring inservice training to the literacy teacher on site. Computers can provide instant feedback throughout the training process. On teletype computers, teachers have a printout record of the programs and their responses. Together with instructional materials, reading and lecture type instruction, computer aided instruction makes teacher training of a large but scattered group more manageable.

With the help of Dr. Russell Burris of the Consulting Group on Instructional Design, I have been developing a series of computerized case studies as part of a three course training program for adult basic education teachers. The first of these courses is intended to sensitize teachers to the problems of teaching a target population that is mostly poor and very often minority groups. Blacks, Native American Indians and Americans of Hispanic background are over-represented in the target population of adults lacking eighth grade educations in proportion to their percentage of the total population. Teachers need to develop sensitivity to the special needs of minority group persons and some understanding of language and dialect.

Copeland H., et al. Certification in Adult Education, (preliminary draft) University of Minnesota, 1976. Many states such as North Carolina, for example have no formal certification requirements, and rely solely on the discretion of local program administrators to hire teachers.
differences. They need to be aware of the pitfalls of using standardized tests on culturally different groups. They need to become aware of the constraints environments such as prisons, vocational training programs, with limited training time and programs for shifting populations of migrant workers put on the educational situation.

The second of three courses deals with diagnosis and prescription for the adult learner. Teachers are familiarized with the diagnostic instruments and techniques suitable in working with the adult students. Standardized testing methods common in elementary and secondary schools have limited use in adult programs. Teachers need to learn methods of diagnosis that will tap individual reading performance and then develop programs that will have direct applicability to such adult literacy goals as reading for working (vocational literacy), reading for consumer education (reading shop advertisements, for example) or reading for helping their own children in school.

The methods and materials course both familiarizes teachers with existing materials for teaching reading to adults, and helps teachers develop their own materials. Existing materials for adults are mainly designed to develop competencies towards an eventual goal of either a GED or high school diploma. There are virtually no materials designed to help an adult develop the specific types of reading skills needed for specific trades. Little has been done to teach parents how to teach their children to read. Some materials are available to help adults develop such everyday reading skills as reading road signs, recipes, and newspaper advertisements.

A case study approach has several major advantages in such a training situation. It helps individualize the teachers' thinking. Very often the most difficult training task is to break teacher's habits of thinking gained over long years of working with elementary school children. Teachers think in terms of class groups and single curricula for all those involved. Case studies present the whole spectrum of adult reading goals and needs in a way that is interesting to the teachers and somewhat less academic. Case studies help the inexperienced teacher understand the realities of dealing with adults of all ages 18 to 65 years and over, with very unique needs and goals quite unlike the needs and goals of children in grades one through eight.

The computerized case studies I have developed are being used as an integrated segment of the three course training series. Once teachers have gained a background of the major problems in teaching adults and some familiarization with the instruments and methods used in teaching reading they begin working on a series of computerized case studies illustrating some of these major problems in the field. For those teachers who are unable to get to the University much of the background could be supplied with a handbook, sets of test materials or a workshop.
In the first case study the teletype computer prints out basic referral information on a client named George. This information is quite sparse and consists of age, occupation, some initial reading scores of dubious value, and some additional comments from a social worker to the effect that George wants to learn to read, but complains the page "goes blurry" whenever he tries to read. Based on this information, teachers can pick one of four courses of action to follow with George. The first option is an informal talk designed to elicit background information on George's immediate and long-term goals, schooling and job experience. Selection of this option gives a list of thirteen types of information they might want to try and gain from George. Some of these types of information are inappropriate and would alienate the client, others may yield little information. As each item on the list is chosen so the computer gives both the information and feedback on the appropriateness of the choice.

A second option is testing. Students are given a choice of tests to administer, and in each case the test results with a display of the exact reading and math errors made so that an informal analysis can be made and the appropriate diagnostic technique selected. Teachers who omit tests usually realize their error when they have to set priorities for tutoring and decide on what skills to teach. At each stage feedback is given as to the appropriateness of the choice and reference is made to reading materials and outside sources where necessary. For example, misinterpretation of an error due to dialect on a reading test will elicit both an explanation and reference to an article on Black dialect.

The third option -- to ask for additional information from the social agency that referred George turns out to be futile. The fourth option to seek counseling help proves to be unavailable. Teachers to successfully complete the exercise, must pick both options one and two, first background information then testing. Not until both options have been selected can a teacher go onto the next stage of the program which is setting goals and priorities for tutoring. Priorities must be selected in the correct order. Incorrect responses are given reasons why priorities would be higher or lower on the list.

The final stage of the case study requires pinpointing the exact reading and math skills George needs. The correct skills are selected from a comprehensive list of reading and math skills. Each skill must be listed, failure to list one of the vital skills George needs elicits a 'please try again' response from the computer.

George illustrates the case of a young Black non-reader who exhibits many language or dialect differences. A second case study, Richard, illustrates the problems of an older man who reads at the middle grades level. He has been injured in an industrial accident and needs reading skills to successfully retrain in a desk job. This case goes into detail on the function and purposes of testing, the problems of low motivation and diagnosing reading problems beyond the decoding or initial stages of reading. Two additional case studies are being developed to highlight problems of a welfare mother with virtually no reading skills and a woman with higher, but insufficient reading skills in a vocational setting.
Computerized case studies give inexperienced teachers an opportunity to apply some of the knowledge they have gained from readings or classwork before being faced with an actual adult non-reader. Learning to spot error patterns in reading and math test responses takes quite an amount of practice. Most of the teachers who did the computer case studies did them at least twice before they came out with a diagnostic report they felt happy with. Most teachers felt better prepared to go out and perform an actual diagnosis of a client's reading problems which they were also asked to do as part of the course.

Response to the computerized case study approach has been overwhelmingly positive. Once students have learned to access the problems and deal with the occasional technical hitch everyone seems to have enjoyed them. Twenty-four students so far have done the initial case study. George has also been demonstrated to numerous faculty members at the University of Minnesota and other universities.

Adult literacy training has always been characterized by low per capita spending. Some of the more advanced computerized learning systems are far beyond the resources of the average adult basic education program. Teletype computers, which are cheaper, are useless unless a student can already read. In teacher training, however, there are staff development funds. With careful use of existing computer technology and equipment available in high schools in Minnesota, we can develop a training system uniquely suited to the field. Computers can reach remote areas that the university can not and can provide "education on demand" for busy teachers who might not otherwise take advantage of their educational opportunities.