DOCUMENT RESUME

ED 075 687   AC 012 630

AUTHOR   Knight, David W.; Friedman, Lora R.
TITLE   Readings for Teachers of Reading in Adult Basic
                Education.
INSTITUTION   Mississippi State Dept. of Education, Jackson. Div.
                of Instruction.; University of Southern Mississippi,
                Hattiesburg.
PUB DATE   70
NOTE   333p.

EDRS PRICE   MF-$0.65 HC-$13.16
DESCRIPTORS   *Adult Basic Education; Adult Literacy; *Basic
                Reading; Books; Functional Illiteracy; Instructional
                Materials; *Literacy Education; Reading
                Comprehension; Reading Diagnosis; Reading
                Instruction; Resource Materials; *Supplementary
                Reading Materials; *Teaching Methods

ABSTRACT

        This book of readings accompanies the "Handbook for
Teachers of Reading in Adult Basic Education"; each part is meant to
supplement each chapter in the handbook. Articles are grouped into
the following categories: (1) an overview of adult literacy training;
(2) social and psychological bases of adult basic education; (3)
basic reading skills; (4) comprehension; (5) measurement of reading
performance; (6) organizing for individual differences: methods and
materials; (7) evaluation; and (8) materials. (For related document,
see AC 012859.) (Author/KM)

ERIC

ED 075687

Readings

for

Teachers of Reading

in

Adult Basic Education

READINGS FOR TEACHERS OF READING

IN

ADULT BASIC EDUCATION

David W. Knight and Lora R. Friedman
Reading Center, University of Southern Mississippi
in cooperation with
Dr. G. H. Johnston, Superintendent of Education
Dr. Joe E. Holloway, Director of Division of Instruction
Joe Baddley, Supervisor of Adult Education
The Mississippi State Department of Education

1970

This book of readings for teachers of reading in adult basic education accompanies the *Handbook for Teachers of Reading in Adult Basic Education.*

The organization of this book follows that of the Handbook, and each part here is meant to supplement each chapter in the Handbook. It is hoped that the readings presented will broaden the teacher's understandings of the background, philosophy, and practices utilized in an effective program.

David W. Knight
Lora R. Friedman

TABLE OF CONTENTS

PART I

AN OVERVIEW OF ADULT LITERACY TRAINING

THE ILLITERATE AMERICAN

One result of efforts to improve all levels and areas of education has been a surge of governmental and private action to wipe out illiteracy. More money and more leadership are needed to get the movement rolling in high gear; but once the groundwork has been laid, the brunt of responsibility for the day-to-day operation is likely to fall on public-school administrators and their staffs.

The illiterates receiving instruction today (less than 50,000 last year) are only a small fraction of the estimated 8.3 million Americans over 25 who are classified "functional illiterates" — persons who have not completed grade four. About 2.8 million of these have *no* ability to read or write.

These statistics compiled by the Office of Education from 1960 Bureau of the Census information, bring into focus one of the fundamental tasks confronting American education; how to teach illiterate adults how to read and write well enough to live in the complex twentieth century.

To many illiterates, learning to read and write is an important step to promotions or better jobs. For some, literacy is the answer to getting any kind of a job. For others, it means enjoyment of newspapers, books, and magazines and the very special and not unimportant satisfactions arising from being able to write their own names. Also important is the self respect and dignity it brings to people who once felt inferior and even humiliated because of their handicap.

Virtually all job-training programs, such as those set in motion by the federal Manpower Retraining Act, require that trainees be able to read and write. No longer can an apprentice learn to use the tools of a trade through oral instruction or watching another man work. Textbooks, parts catalogs, and assembly manuals are standard today for both training and day-to-day job activity.

Today, the low-income, educationally deprived workers have the highest unemployment rates, receive the bulk of public welfare aid, and comprise a substantial percentage of those rejected for military service.

Who are these persons? Where do they live? What is being done about their plight?

Functional illiterates are concentrated in four main groups: (1) persons over 40 years of age; (2) persons living on farms, especially Negroes; (3) persons with rural backgrounds who have moved to urban centers; and (4) migrant farm workers and other disadvantaged groups. Every year, their illiteracy is exacting a stiff price in wasted talent, lost wages, stifled ambition, and even weakened national security.

A National Problem

Although the South has the highest percentage of functional illiterates on a state-by-state basis, the problem is national, not regional, with the largest concentration of illiterates in urban centers across the nation. For example, there are nearly 800,000 illiterates (many are Negro and Puerto Rican) living in the New York City area. Several other states having large numbers of functional illiterates are California, 505,000; Illinois, 365,000; and Pennsylvania, 453,000. Massachusetts, Indiana, Missouri, and Oklahoma each have more than 100,000.

Most literacy education is being carried out by public-school adult-education programs and by private groups and foundations. While there is little federal aid in this area as yet (beyond some pilot programs under the National Defense Education Act), a bill introduced in the last session of Congress would have provided $50 million over the next five years to combat illiteracy in America. The bill was designed to attack illiteracy through grants to:

Colleges and universities for teacher-training programs and

literacy class attendance.

States for aiding school districts in the financing of literacy classes.

State boards of education to aid them in developing and improving literacy education programs.

The state grants were to be distributed in proportion to the number of adults within a state who lack a sixth-grade education, as compared to the total for the entire country.

Meanwhile, the literacy education programs now in operation are nowhere near sufficient—either in quantity or quality—to meet current demands.

According to a report from the U.S. Office of Education, "Of the 15,200 school systems studied, only 4,840 have reported any type of adult education program, and of these, only 160, or 3.3 percent, offer instruction in basic literacy education."

Several key areas where literacy education *has* gained a foothold are Memphis, Tenn.; Dallas, Tex.; New Orleans, La.; Philadelphia, Pa.; and northern Alabama.

In an 11-county area in northern Alabama there are approximately 105,000 functional illiterates, including 19,000 persons who have never been to school. Literacy education is being provided this area through use of the only state-operated educational television network in the country. This ambitious use of television for literacy education is being carried on with the aid of a $66,000 NDEA grant.

The Laubach (picture-word association) method of teaching reading and writing is used in a program of 98 lessons. The TV lessons are reinforced with group instruction by specially trained nonprofessional volunteer teachers.

Although only 600 persons signed up for the original course (which was launched in 1960-61 with considerable publicity), Miss Nell Peerson, director of the program, claims that thousands more watched the lectures on their own.

"We still are encountering a lot of diffi

substantial reduction in the number of functional illiterates, it does represent a giant step forward. The second-year enrolment more than doubled (to 1300), with many new students declaring their interest was stimulated by watching some of the previous year's lectures.

Educational television is also being used for literacy education in Memphis (headquarters of the Foundation for World Literacy), in New Orleans, and in Philadelphia. In Dallas, the National Council of Jewish Women has developed a literacy training program for the 30,000 adults in the area who are unable to read or write. Chapter members have devoted thousands of hours to contacting students, providing teachers, and securing co-operation from schools and other public agencies.

The value of these programs can be best understood by the following letter received by a director of one of the literacy education programs from a student: "I always said that if I only had a chance I would really try my best to learn. Well, I've got that chance now, and I don't intend to let anything stand in my way if I can help it."

This student's enthusiasm is shared by many other American adults whose lives are being revitalized and redirected because they are, at last, learning to read and write.

GUIDELINES TO UNDERSTANDING
ILLITERATE ADULT AMERICANS
Richard W. Cortright

A RECENT PROFILE of a typical teacher of adult illiterates in a metropolitan area showed that the typical teacher of adult illiterates was a married woman in her early forties with more than three years of college who usually worked in a community organization (1). Some of these teachers were home economists. For example, one home economist from Colorado who had been teaching in state university extension and had served as a county home agent taught three adult functional illiterates.

An adult functional illiterate is usually defined as an adult of 25 years or more with a sixth grade education or less. However, the functional illiterates whom this home economist taught might not be readily identified by years of school completion. One had finished high school and the others had eight and nine years of school behind them--far behind. The fact is that these adults (or adolescents) were members of that growing group who only stand and wait--the invisible dropouts.

If it is true that more than ten million adult Americans are adult illiterates in 1966, then more than five million are women. And what does that mean? Can they read a recipe? Can they follow sewing instructions? Can they read self-help articles in national women's magazines, or bulletins, or on hangtags? What does it mean for a woman to be functionally literate in homemaking skills?

No one has precisely answered the question, yet. Generally, educators have stated that the adult in contemporary America with push buttons, remote control, and split levels needs to be

This program should be offered for non-readers who wish to begin the study of reading, as well as for those who have already developed some proficiency in reading. The course could be broken into classes of grades 1-3, and 4-6. The instructor then has a basis for grouping within the class, and can instruct accordingly. As a student improves and demonstrates a readiness for the higher levels, he may be transferred to the next highest class. He need not wait for the next semester. In this manner, a certain amount of flexibility provides for an individualized approach. The student can improve at his own rate and is not held back. This procedure works well in practice and does not tend to overload one class, as students are continuously progressing. Some adults who are working toward a high-school diploma are most eager to develop their reading skills quickly in order to handle the high school courses. The motivation here is strong, and it is not unusual for a student to make a gain of one or two years in just a few short months.

The program at this level should emphasize all of the skills and techniques necessary for the mastery of reading in Grades One through Six. In a typical program, the student at the first-year level is taken through the beginning stages in the growth of reading skills. He has experiences in both oral and silent reading. As he begins his study of words, he is given exercises in auditory perception and discrimination. This is followed with work in visual perception and discrimination. As the student develops proficiency in these areas, he progresses through the development of word meanings. Carefully planned lessons in word analysis are presented. Through the use of graded materials, the student grows in his ability to read.

reading, and appreciation of literature.

B.   Secondary Levels 7-12

The secondary level of the adult reading program must be designed to help students to develop the skills and techniques necessary for the mastery of reading in Grades Seven through Twelve. The general objectives at this level encompass a wide range of reading material with emphasis on comprehension, vocabulary development, and rate. Training should be given in grasping literal and broad meanings; recognizing the author's purpose and intent; evaluating what is read; identifying topic sentences, main ideas, and supporting details; and critical reading.

When a student demonstrates his competence and ability in efficient reading at the secondary level, he may be placed in the advanced developmental reading program.

C.   Advanced Developmental Reading

This course is designed for the average or better-than-average reader who wishes to sharpen his reading skills. All of the higher level reading skills are emphasized. The general objective of the course should be to help every student to achieve his reading potential.

The specific objectives of developmental reading were prepared under the chairmanship of Dr. William S. Gray of the National Society for the Study of Education. It would be well to

of words. A continuous program of practice should be employed to insure proper development of these essential skills

2.   To develop the ability to read materials of varying levels of difficulty and at the most efficient rate.

Reading rate varies with the reader's purpose and the type of material he is reading. One would not expect to read a technical report at the same rate as a novel. Once the reader's purpose is established, he may read a passage or an article very thoroughly or he may skim rapidly. The principal text or workbook for the course should offer a wide range of materials and levels of difficulty.

3.   To devlop the ability to secure the broader meaning inherent in a passage.

In meeting this objective, materials should be presented to give the student practice in getting the broader meanings of a passage. This includes identifying the author's intent or purpose and his tone and attitude. Practice exercises should enable students to understand how attitudes are expressed.

4.   To develop ability to judge the relevancy, accuracy, or importance of the author's statements, the logic of his presentation, or the validity of his conclusions in the light of the author's purpose.

6.   Thorough reading.
7.   Study type of reading.
8.   Understanding of broader meanings.
9.   Evaluation of writing.
10.   Skimming and scanning.
11.   Reading in subject areas.
12.   Reading technical and complex materials.

A total adult reading program, offering instruction and practice in the development of reading skills, is both feasible and practical. It is the most efficient way of teaching reading to adults, regardless of the level of skills they possess when they enter the program. Through proper testing and overall administration, a complete and academically sound program can serve to meet the needs of all adults in a growing American population.

LITERACY THROUGH TELEVISION
R. A. Luke

National concern over the problem of adult illiteracy has never been greater than it is today. The reasons for this are clear and sharp.

First, because of increasing mechanization and automation of industry, it is necessary to find new jobs for jobs which no longer exist. We are in a never-ending race between the number of jobs disappearing every day and the need to find new jobs for displaced workers. It is estimated that there are approximately 2 million jobs being eliminated annually because of automated industrial processes.

Second, it is necessary to provide training and retraining programs at various levels of technical complexity for individuals who already possess a sufficient basic educational background to enable them to move into the new kinds of positions evolving as a result of automated processes.

Third, there is the unpleasant but undeniable fact that millions of individuals in the United States have a severe educational deficiency. The 1960 National Census indicates the magnitude of this problem: At the time of the enumeration, there were 10 million "functional illiterates"[1] (individuals who had not completed five years of school), 23 million adults over 25 years of age who had not completed eight years of formal schooling, and

thousands of adult basic education classes already being held——though not generally throughout the United States——under the sponsorship of local boards of education.

While most of these funds are being used to support classroom programs of adult basic eduation, either in school buildings or in convenient neighborhood facilities, there is no restriction against using the funds for televised programs of instruction. Such programs are under way in a number of communities.

The use of television in the area of literacy education is readily understood by many directors of adult education throughout the United States. This understanding is attributable largely to the fact that two successful televised series of instructional programs for adults have had wide visibility on kinescope or videotape in many communities.

The first of these programs was made in 1957 by the Laubach Foundation when it produced a series of films transposing for television the well-known principles of Mr. Laubach's *Streamlined English*. Kinescopes of the films were widely shown. Perhaps better known, however——both because it was produced later and had the advantage of more advanced routing techniques——was *Operation Alphabet*, a television literacy series developed by the Philadelphia, Pennsylvania, Public Schools and later distributed nationally by the National Association for Public School Adult Education. This program succeeded not only because it was technically effective but also because financial

station, WFIL, *Operation Alphabet* is composed of 100 half-hour television programs. Grants from the Annenberg School of Communications (University of Pennsylvania) and the Minnesota Mining and Manufacturing Company made it possible to tape the program and offer it free to other television stations. Accompanying the 20-week series is a home-study book containing 100 lessons based on the television program. The book reinforces and supplements what the learner sees and hears on his television screen.

Operation Alphabet is designed to help the functional illiterate learn both basic reading and writing skills. For four days each week, a few new words are introduced for sight recognition, and one script letter is brought into learning-to-write part of the lesson. The fifth day (usually a Friday) is devoted to review work. If he follows each lesson carefully, the conscientious learner will reach——or nearly reach—— a third-grade reading and writing level by the time he completes the series. It is at this point, then, that efforts need to be made locally to get him enrolled in a formal educational environment so that he can progress to the eighth grade of literacy competency and beyond.

Estimates as to the effectiveness of televised instruction vary widely. In Philadelphia, enrollment in elementary adult education classes in public schools are reported to have increased by 25 percent after the first showing of the series. In Cincinnati, Ohio, enrollments rose 21 percent. Kansas City, Missouri' in common

primary aim is to supplement and stimulate regular classroom work.

The success story of Philadelphia, Cincinnati, and Kansas City has been reported by many other communities. On the other hand, many cases exist wherein *Operation Alphabet* was shown by television stations without reaching a single illiterate or, at the very best, a mere handful. The key to the success or failure of the entire project rests with the effectiveness of the promotional campaign devised to accompany the program in different communities.

Only two systematic research studies have been made on televised literacy programs. In 1959, a $66,000 National Defense Education Act grant was awarded to Alabama to assist in the televising of the Laubach series over the state-operated ETV network to provide literacy education for an 11-county area of northern Alabama. Six hundred individuals registered for the first course, but it was estimated that many thousands more watched privately.

Under a Cooperative Research Grant, Nell Peerson studied the Alabama campaign. She found that her adult subjects read considerably less well, on the average, than a typical second-grade child in the Alabama schools. Those adults who completed the program, however, seemed to have made more progress than did the Alabama second-graders during the same period of time. The adults were reading at the mid-second-grade level. Miss Peerson

those who studied individually at home. Furthermore, the use of the home-study guide did not apeear to make any difference in the reading improvement of *Operation Alphabet* students, nor did the *Operation Alphabet* telecast seem to affect the enrollment of public school adult literacy and elementary education classes.

Thus, it is obvious that educational television is not a cure-all for the problem of illiteracy. However, in spite of conflicting evidence, it seems very apparent that while *Operation Alphabet* may not be a general cure for the problem of illiteracy, if there is a well-supported, centralized effort to elicit an adequate response from those who need the program, much progress can be made.

When educational authorities who used *Operation Alphabet* in all parts of the country were asked for their comments and criticisms, they agreed that the greatest single problem initially encountered in trying to eliminate functional illiteracy is not the absence of teaching tools--limited 'though these may be--but that of motivating the individual to take advantage of the opportunities available to him. Many adults feel that they are too old to learn, and others are satisfied with their jobs or life situations and see no reason to change them. Still others have so long abstained from any systematic attempt to learn that the mere idea of studying--even in the privacy of their homes via television--is too much for them. To the man who does heavy manual labor, holding a pencil at TV lesson time can be a

Experience indicates that effective employment of this instrument requires close and dedicated co-operation between the experienced literacy educators in close contact with classes in the field and the television specialists who know the television medium. But the articulation of the broadcasts with student text-workbooks and particularly with self-instructional materials still awaits development and appraisal. The promise is great.

FOOTNOTES

[1]Illiteracy in the United States is not found in any one group or geographical location. Of the 10 million illiterates, roughly 4 million are native whites, 3 million are foreign-born whites, and 3 million are negroes. While a larger percentage of illiterates are over 45 years of age, each year thousands of new adolescents continue to add their numbers to the total.

CONSIDERATIONS IN CONSTRUCTING A BASIC READING PROGRAM FOR FUNCTIONALLY ILLITERATE ADULTS
Esther Fox

Who Are the Functionally Illiterate?

The illiterate adult in American society is that individual who does not have the necessary reading skills to make him eligible for vocational training when his marginal job in the labor market is discontinued. His lack of reading skills serves to make and to keep him unemployable. His functional reading may be on a number of levels, varying from preprimer to that of the word-by-word reader who does not comprehend what he reads. He may well be of that 25% of the population which is trainable but below average in intelligence.

Or he may be of average intelligence but of that unfortunate group of individuals who have been educationally deprived. Many adults in the Appalachians have suffered from lack of transportation to out-of-the-way schools where compulsory school laws were ignored and where the one-or-two-teacher schools were, and too often still are, staffed by teachers who have high school

It is desirable that guidance in a reading program should also result in the opening of a whole new world of informational and recreational reading for these individuals. The use of such materials as the Reader's Digest Skill Builders[1], if continued through the various levels, should result in an interest in reading current magazines and newspapers.

It is not the purpose of this type reading program to take the place of those improvements in reading courses which are presently available in many adult education programs. These are primarily to increase the speed of reading for all adults and to increase the reading skills of poor readers.

How to Find the Illiterate Adult

The adult who cannot read is most reluctant to acknowledge his deficiency. Often he will go to any length to hide it. A common practice of workers who cannot read is the tearing off of corners of cartons and papers for purposes of identification. Poor eyesight and the lack of glasses are often used as excuses to get others to read directions aloud. Care must be given in identifying this type of individual and much contact is needed in persuading him to attend a basic reading class. Surveys of the type which are commonly employed to obtain information are useless when used to locate the educationally handicapped.

Ways of Administering a Reading Program

Such a program of reading instruction should start with a policy-making group which will also administer the program. Representatives of various cooperating groups with specialists in advisory capacities should make up the board of directors. Several community groups or agencies, such as interested civic and service clubs, welfare agencies, county agents, management in small industries, public school systems, and community colleges might cooperatively sponsor such an endeavor.

Any one of these groups could provide equipment and building space for the program. Community buildings, abandoned rural schools, public schools, or space in nearby churches might be utilized. Some groups might even meet in homes.

A reading program for marginal persons would necessarily have to be financed largely by such agencies as welfare departments, civic and service groups, college extension services, state boards of education, adult education groups, etc. Wherever possible the learners should carry part of the expense. A small fee might prove preferable to paying for expendable materials since scholarships can be more easily provided for those who are not employed. A financial investment in one's own learning often provides additional motivation.

and Carnahan's complete word recognition program, and Dolch basic sight cards might all be profitably used in testing and later in teaching (see Appendix). Individual charts and word-recognition books should be provided for home use.

Harris' method of quick comprehension[4] with all the group members reading orally two or three sentences of a selection and answering related questions could well be used to find those who are word-by-word readers and who need guidance primarily in the ability to read with meaning.

After the reading program has been in progress for some time, testing of a more formal nature can be gradually introduced. It is important that the learner approach the test as a means of determining how well he is reading and what further help he needs. Where progress is good, much should be made of it. In most instances it would seem unwise to point out to an adult that he is now reading on a third grade level, but when care is taken to mention an increase of two reading levels, pride in accomplishment should result in increased motivation.

Since no cumulative records will be available to the teacher of adults, mental maturity tests and standardized reading tests may have to be given at this time. Where the reading program is sponsored entirely or jointly by vocational guidance clinics or wel-

In spite of the adage, "You can't teach an old dog new tricks," all adult educators are committed to the proposition that adults can learn. In fact, it may be time we invented a new slogan, "There are some tricks that only an old dog can learn!" Actually, it is not the question of whether or not adults can learn that concerns us, but such questions as how well do they learn? under what conditions do they learn best? and what can we as teachers and administrators do to enhance the learning situations for which we are responsible?

It has been well established that growing older does have its effects on the ability to learn—not all of them unfavorable. During the past fifty years there has been a large amount of testing and experimentation with individuals grouped according to age; and from the results inferences have been drawn about the decline of learning ability with age. There has been very little of the more important kind of study known as longitudinal studies where changes with age are recorded on the same individuals.

There are several difficulties in the way of running tests on great numbers of adults. One of these is the difficulty of getting adults to stand still long enough to be tested. In the case of children, one can, with the consent of school authorities, go into any number of classrooms and administer tests to captive audiences. Moreover, this can be done with the same children year after year. The problem with adults has been partly solved by Wechsler who tested hundreds of adults who were sick and confined to Bellevue Hospital in New York City. The

Children, through practice, become accustomed to taking such tests. Many middle-aged and older adults are not so accustomed. To them the many diverse, unconnected, and apparently purposeless questions often seem odd and confusing. The tasks involved in the usual intelligence test are largely clerical, somewhat bookish, and according to Pressey,[3] slanted in favor of the upper middle classes. They call for abilities which are developed and kept in practice in school but are less exercised in most adult occupations and activities. There is considerable thought that to some extent, the low scores in the later years may reflect poor cooperation on the part of adults rather than poor ability.

A third difficulty is the inability to test a group of the same adults year after year. Many longitudinal studies have been made of children, but only one sizable one of adults—that of Terman who identified about 1,400 gifted youth in the Los Angeles area in 1921. Several followup studies of these individuals have been made, but of course, this group is not typical of the general adult population.

But in spite of the various difficulties encountered in attempting to judge the effect of the maturing process on learning, certain general trends seem to be clear. First, mental ability, defined as the ability to perform the greatest amount of mental work in a given time, does decline with age. An averaging of the results of various researchers indicates that mental ability of adults thus defined reaches a peak in the early 20's declines rather slowly

but only *speed* of performance that declines with age. For example, Lorge[4] has cited several experiments of his own and those of other psychologists which show that when the speed factor is removed from tests, adults do not tend to show decline with age but in some cases have showed increases in their learning abilities. Apparently the slowing up of the faculties of sight, hearing and reaction time tend to limit the *quantity* of performance, but have no ill effect on the *quality*, that is, the ability to solve problems.

To summarize this idea, the mental ability of adults as exhibited by performance on tests shows a gradual decline after the early 20's but this decline is related to speed of performance rather than quality. While the absolutely best time to learn anything may be in the 20's or early 30's, any decline in ability is so slight that adults in the mid-forties or early fifties can expect to learn as well as they could when they were in their mid-teens—which has always been considered an excellent time for learning.

So far we have been talking about group averages and we have been talking about them in terms of general ability or general intelligence. Group averages can be very misleading. There will usually be greater individual differences within any of the age groups tested than between any two contiguous age groups, and only a few individuals will have abilities at or near the average. Therefore, the important thing is the

general information. and on items depending on experience or judgment.

Two additional variations of the general decline in learning ability with age should be noted. First. there is much evidence to show that the more gifted the adult is the less he is inclined to show loss of ability with age. Second, adults who keep their mental faculties active tend to show little decline with age.

We may now ask, "Does age produce any advantages in the learning process?" The answer is in the affirmative. First, middle aged and older adults have accumulated a mass of experience and knowledge which is of invaluable assistance as they bring it to bear cn their learning activities. Second. adults have fewer goals toward which to direct their efforts. Instead of proceeding in many directions as youth does, older persons conserve their efforts and energy by driving toward a few selected goals. Third, adults are highly motivated. They are neither "sent" nor "sentenced" to school. They come because they have a strong urge to learn. This urge is so strong it has successfully competed with fatigue, love of ease, desire for recreation, desire to be with family, and the pull of community responsibilities. Fourth, adults have better work habits. They have learned that to succeed, one must organize his efforts and persist in the direction of his goals. Finally, adults have more wisdom and judgment than youth. They have a feeling of what will work and what will not. They see relationships not

friendship groups, work groups, church groups, family groups, play groups, etc. Upon reaching maturity, adults take on many responsibilities, the most serious of which are those pertaining to their families, their work, and their community life.

As the adult performs in his various roles as worker, husband, father, citizen, church member, and club member, he is subjected to a variety of social pressures—pressures to attend meetings, to join clubs, to assist in various group and community tasks, to assume family responsibilities and perhaps most important of all, to advance in his work. While these pressures have little direct effect on the ability of the adult to learn once he is in class, they do determine whether or not he will attend class and for what purpose. It will be fruitful, I think, for us to chart these pressures in terms of positive and negative influences. Let us look at the positive influences first:

1. There is the pressure to prepare for a job and to receive training for advancement on the job.

2. The need to keep up with the technological and sociological changes in the swiftly moving world.

3. The need for self-fulfillment. This may take the form of cultural learning, learning for personal development, or for avocational and recreational skills.

4. The need to be an informed citizen.

5. The need for practical information for a particular

3. In some cases, the extra costs of tuition, commuting, and books and supplies create a financial hazard.

4. The uncertainty of work hours caused by changing shifts or likelihood of being moved to another city can be a schedule hazard.

5. In some communities and among some groups, the idea of going to school is associated only with childhood—a psychological hazard. This is particularly true for those in 60's and 70's.

It is the balance of these encouraging and deterring forces which determines whether an adult will decide to utilize formal instructional opportunities to solve his problems.

Application of Research Findings

Now we come to the application of these findings to the teaching of these findings to the teaching-learning situation. What is the meaning of these facts about the psychology and sociology of adult learning to those of us who are teaching and administering classes?

First, if we are going to talk about adult learning, we had better define it. The purpose of learning is to institute change. In learning, we add to or modify our previously existing knowledge, skills, attitudes or appreciations.

Psychologists say that learning involves three elements: need, effort and satisfaction. An individual feels a need to

out into open warfare in the Colonies, but being confined to political maneuvers, legislation, and oratory in the mother country. In this case, what has happened is not the adding of a new skill, but the *modification* of an old idea. Pressey and Robinson put it very succinctly when they say learning is "a process by which an individual makes some new skill or idea his own because in some way and to some degree it fills a need he feels."

If this is learning, then teaching may be something different than some of us have previously thought it to be. It is certainly much more than the mere imparting of knowledge. In fact, it is doubtful if knowledge can ever really be imparted. It can only be learned by effort on the part of the learner. In the true teaching-learning situation, the learner needs to know and the teacher provides the social, material, and psychological setting in which it is not only possible for the adult to learn, but normal and natural for him to do so. In the best situations, the adult will not only learn normally and, with satisfaction, but he will do so with excitement, with joy, with the thrill that comes from using his powers to the fullest. The teacher then is not merely the person who tries to transport ideas from one head to another. He is the resource person, the stimulator, the clarifier, the catalyst, and the integrator of the group — any and all of these things as and when he needs to be. Teaching is the name we give to the

activity with age, the attitudes the adult has toward learning, his concepts about himself, the amount of his schooling, and his remoteness from previous schooling.

In the light of these facts, what are some of the principles and practices which, if put into effect, will provide for satisfying learning experiences? The following statements of principles are offered for the consideration of those who may be called upon to teach adults in one of the many new programs supported by federal legislation:

1. *Good teaching takes into account past negative school experiences, remoteness of past schooling and the self doubts of adults, and provides at the earliest possible time in the class for encouragement and for an experience of success.* This can be done by discussing with the class the well-established facts about the ability of adults to learn, or by giving a short review test in the subject, making it simple enough that most any student would get several "right" answers.

2. *Good teaching takes into account the relation between a pleasant social atmosphere and a satisfying educational experience.* When an adult leaves his family fireside, faces the psychological barriers of entering a building customarily used by children, his footsteps echoing down the dimly lit halls, and enters a room

4. *Good teaching takes into account the loss of speed in performance in academic activity during the mature years.* The activities of the group should be paced rapidly enough to be challenging but not so rapid as to be frustrating. Relatedly, since adults may read more slowly and have less time for reading, outside assignments should be selected so as to be most central to the activity concerned.

5. *Good teaching recognizes the validity of the principle of involvement.* When a person does something himself or says something in his own words, it will have more meaning than something said or done by another person. Therefore, the more students can share in determining the goals of the course, and in determining the class activities, the more they are likely to feel a personal commitment to the success of these goals and activities.

6. *Good teaching recognizes the adults themselves as a prime teaching resource.* Each class or group of adults is characterized by a variety of talent and experiences. It is the responsibility of the teacher to study the backgrounds of each member of his group so as to utilize to the maximum degree the talents of each member for the benefit of the group as a whole.

7. *Good teaching recognizes the concreteness and immediacy of most adult goals.* As a rule, adults appreciate applied knowledge

and commuted some distance. Presenting the material in a dramatic fashion, skillful use of audio-visual materials, and frequent change of pace will tend to offset the effects of fatigue and keep a high level of interest in the subject.

10. *Good teaching recognizes each teaching experience as an opportuinity for professional growth.*Good teachers often learn more in a course than their students. The sincere teacher, in urging the growth of others, will miss no opportunity to grow himself.

FOOTNOTES

[1]Wechsler, David. *The Measurement of Adult Intelligence.* Baltimore: Williams and Wilkins, 1944. Chap. 6, "The Problem of Mental Deterioration."

[2]Thorndike, E. L., *Adult Interests.* New York: Macmillan, 1936.

[3]Pressey, Sidney L. and Kuhlen, Raymond G. *Psychological Development Through the Life Span.* New York: Harpers 1957, pp. 111-113.

[4]Lorge, Irving. "Capacities of Older Adults." Chapter 111 in *Education*

PRINCIPLES AND CONDITIONS FOR LEARNING IN ADULT EDUCATION

Gerald J. Pine and Peter J. Horne

Introduction and Purpose

In 1967, Austin E. Bennett of the University of Maine, working in the New England Center for Continuing Education, conceived a project designed to teach helping relationship and problem solving skills to the rurally poor of northern New England. The project became known as the Operation Mainstream counseling training program. It was funded by a grant from the U.S. Department of Labor and initiated in September, 1967. The purpose of the Operation Mainstream counseling training program was to change the behavior of 120 community aides so that they would acquire problem solving and helping skills which they could use in helping others among the poor to solve their own problems.* The aides were employed by Community Action Programs operating in northern Maine, New Hampshire, and Vermont. An evaluation of the Operation Mainstream counseling education project produced a large amount of data from which the author

The principles and concepts culled from the O. M. program in some cases were explicitly stated in the material evaluated, in other cases the principles were inferred, and in a few cases the application and the translation of principles were observed.

It should be noted that the psychology of perception may have affected what was seen and considered significant. People see what they wish to see and hear what they wish to hear. The reader is advised that as objective evaluators the writers cannot claim that they were entirely free from selectivity in perception, at least to the degree that this factor operates in evaluations.

The principles and conditions are stated in general terms and not in reference to the Operation Mainstream program. They are principles which the writers believe can be translated into an educational process which will assist a variety of adults in a variety of situations to learn how to govern their own lives so that they can become more fully-functioning and more productive members of society.

Underlying Definitions

The principles and conditions of learning as they are delineated here reflect the following definitions:

controlled by the learner and not by the teacher (group leader). Changes in perception and behavior are more products of human meaning and perceiving rather than any forces exerted upon the individual. (Learning is not only a function of what a teacher does to or says to or provides for a learner. More significantly, learning has to do with something which happens in the unique world of the learner. It flourishes in a situation in which teaching is seen as a facilitating process that assists people to explore and discover the personal meaning of events for them.

No one directly teaches anyone anything of significance. If teaching is defined as a process of directly communicating an experience or a fragment of knowledge, then it is clear that little learning occurs as a result of this process and the learning that does take place is usually inconsequential. People learn what they want to learn, they see what they want to see, and hear what they want to hear. Learning cannot be imposed. When we impose ideas on people we train them. When we create an atmosphere in which people are free to explore ideas in dialogue and through interaction with other people, we educate them. Very little learning takes place without personal involvement and meaning on the part

Principle 3.

Learning (behavioral change) is a consequence of experience. People become responsible when they have really assumed responsibility, they become independent when they have experienced independent behavior, they become able when they have experienced success, they begin to feel important when they are important to somebody, they feel liked when someone likes them. People do not change their behavior merely because someone tells them to do so or tells them how to change. For effective learning giving information is not enough, e.g., people become responsible and independent not from having other people tell them that they should be responsible and independent but from having experienced authentic responsibility and independence.

Principle 4.

Learning is a cooperative and collaborative process. Cooperation fosters learning—"Two heads are better than one." People enjoy functioning independently but they also enjoy functioning interdependently.. The interactive process appears to "scratch and pick" people's curiosity, potential, and creativity.

subject matter selected to produce these changes. This type of chart may be helpful in assisting the administrator and the teacher in cross checking objectives with content so as to determine what gaps exist which may hinder the achievement of all the specified behavioral objectives; to more clearly and compactly indicate the desired objectives; and to demonstrate the close relationship between behavioral aspect and the subject matter aspect of the program. This would be one way of reformulating the general goals in testable terms. For example, one specific behavioral objective may be to give an adult student in a history course the ability to interpret data; which may also be related to the broad general objectives of developing civic responsibility cited as one of the goals of adult education in California. This would mean that the student would be given an opportunity to deal with new data and an opportunity to practice in the interpretation of it. The end result would be the development of skill and understanding of some principles of interpretation of data that would extend beyond the confines of the course and subject matter into other areas. The focus here would then be on the development of insight and understanding rather than rote memorization of a particular interpretation.[19] Obviously, this skill and understanding will be extremely important in fulfilling many of the general objectives cited. It is only as objectives contain the behavioral and subject matter aspects that we can expect a clear indication of what our educational job must be. In this way, the teacher and administrator utilizes his specific objectives as criteria to select particular courses content methods materials and the steps

contrast to the principled type which strives to supplement the general statewide goals of adult education with the necessary specific objectives required to guide the process of program development.[20]

In essence, the general objectives formulated for public school adult education in California, because of their open-ended character, are relatively ineffective unless they are supplemented by specific goals in the local school district. Without specificity in goal formulation, general objectives serve only as a rationale for the existence of public school adult education rather than to guide and control organizational behavior. An effective set of goals, both general and specific must serve the dual purpose of providing legitimacy for the organization and of guiding behavior.

Professional Standards

A code of ethics and professional standards are developed by a professional organization to meet recurrent problems in the relations of its members to one another, to their clientele, and to the public. They are intended to exercise control over the behavior of members of the profession. The California Association of Adult Education Administrators, in cooperation with the Bureau of Adult Education of the State Department of Education, has established a set of professional standards for adult education administrators.[21]

An important motive for developing this set of professional standards arose out of the criticism of adult education instigated

standards is to strengthen the program of adult education in California. However, many administrators are so dependent on reacting to the pressures imposed upon them by their school districts and communities that they are not always able to act professionally. It is extemely difficult to "discipline adult administrators for violation of standards when counter-pressures stimulating behavior that violates professional standards are beyond their control.

Consequently, while these professional standards do not serve as a means of control over the behavior of many adult administrators, particularly those operating in an expedient type of adult school situation, they represent an excellent summary of desirable administrative practices. The first section deals with standards for curriculum development, including the determination of needs, selection of courses, operation of classes, and evaluation. Under standards for professional relationships, there is guidance for establishing and maintaining relationships with other administrators, with teaching staff, with non-certificated staff members and with students, as well as advice on dealing with problems relating to plant, equipment, and supplies, establishing advisory committees, etc. The status of the administrator as a professional adult educator is also considered.[24]

An important purpose of these standards is to demonstrate to colleagues at other levels of education and to the public that the adult administrator is a member of a truly professional

and to establish an informal code of behavior which serves to guide the activities of adult administrators. Colleague relationships also develop a set of common expectations about threats to the stability of adult programs from outside groups. Analysis of the criticisms and attacks upon public school adult education in California reveals that, during such periods, the administrators develop a high degree of solidarity and in-group feeling which unifies and strengthens the group in combatting its critics. A number of recent attacks upon adult education appear to have strengthened colleague relationships. One index of this deepened sense of colleagueship has been the increased willingness of administrators to volunteer for and work together on common projects under the leadership of the state-wide association.

There are a number of elements which have been identified as contributing to the building of a sense of colleagueship.[26] These are:

1. Ample provision for informal interaction among colleagues;
2. Periodic crisis periods to serve to solidify the colleague group;
3. The development of formal occupational organizations on a regional and state-wide basis;
4. Development of a concept of rendering important service to society;
5. Development of a code of professional standards;
6. Influencing the entry of new members.

and to attend its regional and state-wide meetings. At the annual conference of the state association a section meeting is held to counsel and guide new administrators. To supplement these meetings, new administrators are encouraged to consult with more experienced administrators in finding solutions to problems that arise in their programs. Most adult administrators have reported that the most valuable assistance that they received in adjusting to their new positions was from "old hands" in nearby communities. The marginality of the adult education program, evident in its vulnerability to criticism and attack from within the public schools or from individu .s and organized groups in the community, fosters the immediate acceptance of newcomers.[29] This acceptance, which materially advances the sense of colleagueship, is immediate lest the new administrators' errors may evoke criticism of their programs for this considered an attack upon the entire program of adult education.

The value of developing a strong sense of colleagueship is evident in its contribution to strengthening the group in dealing with critics of adult education. Colleagueship provides an important source of self-confidence in carrying out the duties of the position. Once a new administrator is fully accepted into a colleague relationship, he secures support and sources of assistance that enable him to carry out his duties more effectively. An obligation of membership also implies that the new colleague will not openly criticize other adult administrators. This obligation is

local pressures. And these pressures are exerted by a multitude of pressure groups which subscribe to education for the general welfare but which differ widely on how to achieve the general welfare.[30] Such pressures are an important source of control in adult education. Every adult educator must be alert to the existence of a multiplicity of special interest groups in every community for this is an era of voluntary associations, equating maturity and constructiveness with assertiveness, whether in the censorship of textbooks or complaining about the "frills" in the adult program. Such controls operate when people of similar interests band together to get what they want (or, often, to keep others from getting what they want). As a result, community groups impose controls over curriculum determination by the very nature of pressure upon the adult school for particular programs. Such groups may also be instrumental in eliminating program areas by critizing its legitimacy in the adult school.

The voluntary character of the student body in adult education is another important source of control over organizational behavior. A feature of adult school attendance is that this activity is usually a part-time interest of the adult, and inevitably secondary to other commitments, such as to an occupation, raising a family, social activities, active participation in community organizations, etc. While students above the compulsory attendance age are also free to withdraw from school, and in this

and junior college classes where minimum enrollment norms have been established to maximize state financial aid. This type of social control, although not unique to adult education as Clark asserts, tends to operate at all levels of public education where state aid is determined by enrollment. Some modification of the impact of the enrollment economy can be achieved by a more successful determination of student needs and interests in developing a program and by providing a very effective adult teaching staff.

Conclusions

This article is one of a series of occupational studies of positions in adult education. A major reason for undertaking these studies is to provide more understanding of the work of the professional adult educator.[32] We hope that the outcome of increased research of the occupational roles of adult educators is to improve the quality of professional training and raise the standards of adult education. There is a need for an increased emphasis upon research into problems in adult education if our field is to achieve its potential as the most important force for helping adults deal with their problems of living in a rapidly changing world.[33]

FOOTNOTES

[1] Louis Wirth, "The Problem of Minority Groups," in *The Science of Man in the World Crisis*, edited by Ralph Linton (New York: Columbia University Press, 1945), pp. 347-72 as quoted in *Community Life and Social Policy: Selected Papers by Louis Wirth* edited by E. W. Marvick and A. J. Reiss, Jr, (Chicago: University of Chicago Press, 1956), p. 255.

[2] A new regulation in the *Education Code* provides that no district can charge adults tuition that will exceed the cost of maintaining the class. Cf. *Education Code 9191* (Sacramento: State Department of Education, 1954). This regulation was instituted following the Senate Interim Committee investigation of adult education in the public schools which revealed that some districts were making a considerable profit from their adult education programs. Cf. *Partial Report of the Senate Interim Committee on Adult Education*, California Senate Resolution 185 (1951).

[3] Cf. James Armour Lindsay. *A Survey of the California Public Adult Education Program*, (Sacramento: State Department of Education, 1953), Memeographed. This report estimates that the average district contribution for adult education, for 1950-51, varied from 5.5 per cent to 79.3 per cent of the total cost, pp. 207-8. It is very difficult to estimate a desirable level for local support for adult education. The most important variable is the extent of taxable wealth within the boundaries of the school district. Thus, a poor district may secure a major part of the cost of its educational program from the state of California under the principle of equalization. In contrast, a

[5] *Handbook on Adult Education in California, Revised, 1957.* Bulletin of the California State Department of Education, Vol. XXVI, No. 12, November, 1957, p. 5.

[6] While a basic principle of adult education is to meet the needs of adults where they are, these are not just "felt needs" of the participants but also the needs which the adult educators impute when they view the gap between what is and what could be if their adult participants achieved their full potential.

[7] *Handbook,* op cit., p. 58.

[8] Jack London, "The Career of the Public School Adult Administrator," *Adult Education,* Volume X, No. 1, Autumn, 1959, pp. 3-11.

[9] Robert Redfield, *The Educational Experience,* (Pasadena: The Fund for Adult Education, 1955!)

[10] Jack London, "Program Development in Adult Education," *Handbook of Adult Education in the United States,* ed. by Malcolm S. Knowles (Chicago: Adult Education Association of the U.S.A., 1960), Chapter 6, pp. 65-81.

[11] *Liberal Education in a Technical Age,* (London: Max Parrish, 1955) and A. N. Whitehead, *The Aims of Education,* (New York: Macmillan Co., 1929–Mentor edition, 1949), p. 58.

[12] The concept of life-long learning is used here to signify that adults

[14] *Handbook on Adult Education in California*, Bulletin of the State Department of Education, (Sacramento: State Department of Education, May, 1949), Vol. XVIII, No. 4, p. 13.

[15] *Handbook. . .revised edition*, op. cit., p. 2.

[16] Clark, op. cit., pp. 63-66.

[17] London, "Program Development in Adult Education," op cit.

[18] Ralph W. Tyler, *Basic Principles of Curriculum and Instruction*, (Chicago: The University of Chicago Press, 1950), p. 32.

[19] Robert Ezra Park, "A Memorandum on Rote Learning," *American Journal of Sociology*, Vol. XLIII (July, 1937), pp. 23-66.

[20] London, "Program Development in Adult Education," op cit.

[21] *Professional Standards. . .*, op cit.

[22] *Partial Report. . .*, op cit.

[23] *Professional Standards. . .*, op cit., p. 1.

[24] *Ibid.*, pp. 2-19.

[25] Herbert G. Blumer, "Social Movements," *Principles of Sociology* edited by

[31] Clark, *op cit.*, pp. 61-63.

[32] Jack London, "Problems of the Adult Administrator: A Study of the Work of the Public School Adult Administrator in California," *Adult Education* (Summer, 1959), Vol. IX. No. 4, pp. 222-231.

[33] Cf. Edmund deS. Brunner, et al., *An Overview of Adult Education Research*, (Chicago: Adult Education Association at the U.S.A., 1959).

DIFFERENCES BETWEEN ADULTS AND YOUTH AFFECTING LEARNING

Jane C. Zahn

Adults are not merely tall children. They differ from the young in many ways that influence their learning. They have different body characterist' different learning histories, different reaction speed, diff attitudes, values, interests, motivations and personality. Therefore, those who are trying to help adults learn must be aware of these differences and adjust teaching and the learning environment accordingly.

More and more research shows that the basic ability to learn changes little, if at all, with age. Such changes as so occur as people grow older are not changes in the ability to learn but changes in physical state, including disease, and changes in attention, motivation and ways of viewing experience.

Difficulty of Research

Most children spend many hours a day in school where

worker had completed. In Thorndike's famous study of learning in 1928,[2] the adults studied were university students and their wives, not a typical cross section of the population.

One of the difficulties facing most researchers who compare adults with youth is that it takes less time and money to compare young people and older people during the same period of time. Results of such a study can be reported and used in a very short time. The difficulty of this cross-sectional approach is that society is changing so rapidly that generations cannot be compared. For example, in the United States at the present time, 66% of those between 65 and 69 years of age have no more than an eighth grade schooling. Among the group just reaching 18, only 11% had eight years of schooling or less. We have evidence that education does influence the ability to learn; therefore these two groups cannot be compared. More meaningful comparisons come from those studies that inquire into the changes of the same people as they grow older. Some of these longitudinal studies have been done, requiring a great deal of time, expense and patience. Their results are quite different from the results of studies which compare adults and younger people at the same time. In such cross-sectional studies, decline in intelligence is observed as age increases. In longitudinal studies

In 1962, Brinley[4] studied how age affected speed of performance on 21 speed tests. Some of the tasks were alternating ones; the subjects were asked to alternate between one task and the other. Other tasks were "straight" tasks—pursuing again and again one kind of operation. The older subjects (59-89 years) took more time than the younger subjects (18-36 years) on the shift tasks. However, they also took longer to perform the non-shift tasks.

In older people, those who are most accurate are also the fastest. This is not true for young people, who may be accurate and slow, accurate and fast, inaccurate and slow or inaccurate and fast. Birren and others[5] in 1962 observed this general speed associated with accuracy in older but not in younger subjects.

Goldfarb[6] chose a special group of subjects between 18 and 65 who were above average in intelligence and who had more than the average of formal schooling. He found physical reaction time of men to be quicker than that of women but that the speed of reaction slowed with age. He also found that age brought a greater discrimination of reaction and increasing variability; younger people were more alike in the speed of reactions; as age increased, differences in reacting time increased. This was also true for

075 687

1.0

1.1

4.5
.50
5.6
.63
3.6
4.0

2.8
3.2

3.6

2.5
2.2

2.0

1.8

1.25   1.4   1.6
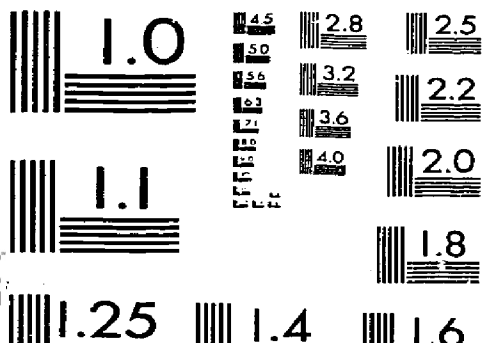
Thorndike was more interested in how fast adults learned than in how much they learned. He measured how fast right-handed adults could learn to write with the left hand, how fast adults could decipher and use a code and how fast they could learn and use an artificial language. In the coding experiment, after eight three-minute practice periods, the students 20-24 years could decode five more letters than the oldest students; however, the oldest students decoded 23 letters at the end of the practice. They had learned the task, they were able to do what was asked, but they were not able to do it as fast as the younger students. From these experiments, Thorndike drew up a curve describing what he called "the ability to learn in relation to age." This curve is not correctly named. The curve describes not the ability to learn but the ability to learn and perform artificial tasks in a given period of time. Thorndike's oldest group averaged 42 years of age. They performed as fast as the 18-year-olds but 15% slower than those in their early 20's. The speed of performance declined a little less than 1% a year.

Intelligence

Whenever learning ability is measured without strict time limits, learning ability does not decline between twenty and sixty years of age. Those who were bright at twenty do not become dull at sixty; nor do dull young people become moronic older people. At sixty a person can learn the same kinds of knowledge and skill that he could at twenty.

From age twenty to age fifty a person does not decline in ability to learn or in intelligence. His actual performance on tasks may be less because of lower motivation, speed, his idea about himself or a decline in vision and hearing. Merely growing older does little to change his ability to learn or think. Growing older does bring different values, goals, responsibilities and self-images. Such changes along with physical changes may affect speed but not ability. Adults often learn less than they might thinking it

Tests

When tests are given at the same time to younger and older people, improvements or declines with age depend on the type of tests given. Tests such as vocabulary tests which allow for accumulated experience show improvement with age. Those measuring perception and dexterity show a decline with age. In 1961, Birren and Morrison[8] analyzed the different tests within the Wechsler Adult Intelligence Scale for 933 native-born Americans, age 25-64 years. They found that the number of years of formal schooling completed to be a much better predictor of good performance on the tests than age. However, on the whole, information and vocabulary tests showed an increase of performance with age; arithmetic figures and picture arrangements showed a decrease, as those tested were older. Although mental ability does not decrease with age, the pattern of abilities does.

Reigel[9] gave purely verbal tests to those of different ages. He found that older people could select synonyms better but could select appropriate words less well. Again, ability to deal with words does not decline with age, but the pattern of using words well changes.

The number of years of formal schooling influences performance on intelligence tests much more than age does. This finding from many studies emphasizes the difficulty of comparing older people with less education to younger people with more. Lorge[10] showed this in 1941, when he studied a group of boys who had been tested in 1921 in the eighth grade. In 1941 those boys who had completed formal schooling did better on the tests than boys of the same intelligence who dropped out of school after the eighth grade.

The level of education completed is determined by many factors in the society, even geography. For example, the armed forces of the United States reject from two to six times as many men from the southeast and southwest for illiteracy and mental

Effect of Health

Health affects performance on intelligence tests. This relationship was shown in the results of a study at the National Institute of Mental Health.[11] The researchers compared men in their 70's who were healthy with others who had some type of disease. On the verbal tests, where older adults usually do better than younger people, the older men with a disease did only as well as younger people, while the healthy older men performed much better than younger ones. Patients with high blood pressure are slower in both physical and mental responses than healthy people of the same age. Obrist, et al.[12] in 1962 found no relationship between age and intelligence tests performance but did discover that regardless of age, those with at normal electroencephalograms (an indication of physical brain difficulty) performed much less well on intelligence tests.

We must conclude from the research done so far that adult mental ability declines if measured by some types of tests, increases if measured by others. If the mental ability test requires the use of experience, practice and judgment, the scores of older people go up. If the tests require speed or completely new and unusual tasks, the scores of older people go down. However, the scores of well-educated, healthy older people are higher than scores of younger people and are higher than their own scores at an earlier age. An older person's ability to perform well on an intelligence tests depends on the type of test it is, his health and his former education, not his age.

Physical Differences

Many research studies as well as common experience bring overwhelming evidence that certain physical abilities decline with age and that physical changes easy to see occur. Eidetic imagery, the ability to see pages, paragraphs or sentences complete in the mind's eye, is at its height in the early teens and declines steadily thereafter, making the task of memorizing more diff

performance with less stress and strain. This lessened speed of reaction probably explains the slower rate of learning of older adults but does not mean their ability to learn is less.

As people grow older, their acuteness of hearing goes down as well as their speed of hearing. In contrast to most physical traits, acuteness of hearing is the highest between ten and fourteen years. After age fifteen, the percent of the deaf and hard of hearing increases. When people lose their acuteness of hearing, they also lose speed of hearing. The older a person is, the longer it will take him to hear a message. Because an older person cannot hear as well, his idea of himself is sometimes damaged, and he may develop unpleasant personality quirks.

Sight also declines with age. Keenness of sight is best in the late teens or early 20's. After the early 20's sight declines slowly to the middle 40's, when bifocal vision appears. With the decline in keenness of sight goes a decline in speed of sight. Seeing takes time. The time needed to shift from seeing something close at hand to something far away and back goes up as a person grows older.

The physical signs of aging, such as gray hair, dimmer sight and wrinkles, reinforce sterotypes older people have about themselves. Stereotypes about older people that interfere with their ability to learn are so strong that strenuous efforts with individuals to look at the evidence rather than at the stereotype have not been very fruitful.

Behavior Already Learned

Learning is changing behavior; if a person changed his behavior very easily and quickly, responding to every experience, very little would be learned lastingly. On the other hand, if a person resisted any change in his behavior, responding slowly to new experiences, very little would be learned at all. As educators, we are interested in changing behavior through giving new experiences while retaining the advantages of stability. We value

changes his behavior more quickly and easily, not having learned so much.

Years of job experience may make it more difficult for a worker to learn a new skill related to the same job. His old habits and attitudes have been well learned, and they will interfere with the new learning. Much of the learned experience and habits will be meaningless in the new learning situation. The greater the experience a person has had, the more the past will probably interfere with the present, especially if the present is different, but not too different, from the past. It is easier for an experienced person to learn a completely new task than to learn to do a familiar task in a new way. In trying to do a familiar task differently, old habits interfere more often.

The way in which a person organizes his perceptions, as well as what he selects to perceive, is influenced by what he expects; and what he expects depends on his experience and his motives. It is more difficult to change the perceptions of an adult than of a child because the adult has had more prior experience.

Relearning

On the other hand, the more time elapsed since an experience, the harder it is to remember. If an adult learns certain skills as a child and then has a long period when he does not use these skills, he will have more difficulty than a child in "brushing up" on those things learned long ago but now forgotten. However, those materials once learned and now forgotten can be relearned with less effort than it took to learn them in the first place. Therefore, an adult relearns most easily that which he learned earlier and not too long ago. He can relearn any material easier than he can learn new material, but it will be harder for him the longer the time since he first learned it.

Adults change the past in their memories; children do, also, but they do not have much past to change. Adults remember the past as more simple, more consistent and

Problems are difficult to solve when they require the use of the familiar in an unfamiliar way. The more recently an object has been used in a familiar way, the more difficult it is to think of using it in a novel way. Therefore, experienced adults have more difficulty than young people in solving problems involving new uses of familiar materials, habits or skills. Solutions to problems used in one situation get in the way of discovering different approaches when the situation changes. Solutions or principles that have worked in one situation may get in the way when they are not appropriate to a similar situation. Previous opinions or biases can affect conclusions supposedly arrived at logically. An adult has great difficulty accepting logical conclusions from evidence if the conclusions fly in the face of some deeply held value or belief.

Learning Expectation

One habit developed by adults may be that of expecting to learn. The adult with more education has learned how to learn; he approaches a new situation with a learning strategy in his mind, and he expects to be able to learn. The number of years since formal schooling may weaken the habit of learning and of expecting to learn.

Adults are less easily changed than children because they have already learned so much. Old habits and attitudes may interfere with new learning. However, if they learned how to learn when young and continued their learning during adulthood, the habit of learning is so strong and the strategy of learning so well developed that learned new material will be even easier for them than for children. The difficulties arise when they must unlearn old habits and attitudes, when they did not learn how to learn as children or when many years have gone by since their last learning experience.

Values Interests Personality

feelings of autonomy, of competence, and of stability. Adult moods are more even, as they have learned impulse control and have a more unified identity. Sanford[13] discovered this when he studied students at Vassar College from their freshman year through several years after graduation. During the college years he found a greater complexity of personality that became stabilized after graduation. Several years after graduating from college, the young women studied had changed only in greater freedom from anxiety, greater sense of well-being and more stability. Willoughby[14] found a drop in emotionality and mental stress from youth to age, and Catell[15] found a steady increase in psychological adjustment with age. Personality of adults is more difficult to change because it is more stable, but it is surely easier to teach those with less anxiety and a greater sense of well-being.

The opinions, attitudes and beliefs of adults are more firmly fixed and often more dogmatic. In 1939 Lorge[16] found more firmly fixed attitudes in older adults than in a group of equally intelligent young people.

As Gardner Murphy[17] has stated, adults have more emotions involved in most groups of facts than do children, we often assume they have fewer emotions involved because adults have learned to control the expression of their feelings more carefully. One example is the common fear of any group of adults that they might not have the "right" or approved feeling, tastes or values.

A child has had so little experience that he has few ideas about what he can hope to do or to accomplish. An adult has a large reservoir of past experience which has shaped his ideas of what he can do. This experience helps the adult not to set unrealistic goals for himself; however, his past experience may have been so negative, unfortunate or irrelevant that he may underestimate his ability to attain a goal.

Studies by Strong,[18] Davis,[19] and others show that children's interests change more often than the interests of adults and that adults have different interests. As people grow older, they

ture, creative writing, or music appreciation if for no other reason than that his interests are stronger in areas that require less physical skill and risk.

The child's attitudes and opinions about economics and politics are determined almost completely by the attitudes of his parents. An adult's attitudes are also influenced by those of his parents but are shaped as well by the attitudes of the majority of his community and by new ways of life, new social groups and new communities he becomes a part of. Although an adult's attitudes are more stable and more emotionally charged than the attitudes of youth, they are influenced by more factors.

Fixed Attitudes

Interests, attitudes, concepts and values do become more fixed with age. The longer interests are held, the more familiar they become and the more they are overlearned. Interests of youth and young adults change more than those of older people; attitudes of older people are more stable. This very stability of concepts makes for the "resistance to change" so often reported as a negative factor in aging. Adults whose youth was spent in a different social, technological and cultural environment may have interests not suited to present intellectual, social and practical affairs. Because of their education and experience in youth, adults may have attitudes that interfere with realistic adjustment of older concepts. Adult interests, however, do change inasmuch as they become less interested in activities demanding physical prowess. Interests basic to adult education, such as reading, writing and music, become more intense. Adults can learn and be taught new interests, especially if they have moved to a new community, taken on a new job or assumed new family responsibilities.

For learning purposes, the most damaging attitude an adult can have is a negative one toward schooling, held over from childhood. The adult may remember school as an unpleasant place where difficult tasks were given, where he was forced to study

learn.

Methods Of Teaching Adults

Adults are not children. Methods successful in teaching the young cannot be transferred without change to teaching adults.

Adults are not as fast as children. They do not see, hear or react as quickly. The teacher of adults should speak more slowly, clearly and loudly. He must allow more time to take notes from the blackboard. More light, a quieter room, more warmth are necessary for adults to learn well. All adults in a room should be able to see the teacher talk; for as adults grow older, they learn, without realizing it, to depend more and more on help from lip-reading, facial expressions and gestures. The teacher should not turn his back to his adult students nor move out of sight. Unusual words, new names, strange expressions should be written out for adults to help clarify spoken words. The scope of the lessons should be planned to allow for the slower speed of adults. Speed of performance should be thought of not only in the classroom but also in outside assignments. The adult can do all that youth can do, but usually it will take him a little longer.

Adults learn more and more quickly than children if the learning is based on their past experience. They learn better the better their health and the more their previous education. Teachers of children have difficulty basing learning on a child's experience, as he has had so little. Teachers of adults have an invaluable resource in the past experience of adults. The adult relearns easily what he has once learned, especially if the time since he learned it is not very long. The more the teacher of adults can base his teaching upon previous experience, the better and faster the adult will learn. The teacher should urge the adult to relate new or abstract concepts to his own experience and to use the past to help himself with the present and the future.

However, an adult's past experience can be a handicap to learning. The two easiest ideas or tasks to teach an adult are

In this situation, his past experience, instead of helping him, interferes with his learning. Those teachers who have the job of teaching an adult to change old habits of performing or old ways of thinking about meaningful material will need patience to allow for the extra time and extra teaching skill necessary.

Satisfaction And Reward

Planning successfully for adult learning means using the past of the adult constructively to give him a sense of mastery and success. For adults, learning proceeds faster and more effectively when satisfaction and reward occur during the process. Punishments slow up the learning of the adult more than of the child. The adult's dignity is at stake. He sees humiliation and failure as an affront to his self-esteem. A teacher of adults must use rewards more often than punishment and must minimize, although not ignore, error. Attitudes can be changed through rewards, through showing progress, through giving opportunities for mastery. An adult fears unpleasant attention and comments when he makes a mistake. An adult is much more fearful than a child of "making a fool of myself in front of all those people."

The teacher of adults should not act as if he were teaching children. His challenge is to teach those who, though slower physically, are more deeply interested, who come to him with a great amount of stored knowledge and experience that can both help and hinder him, who are less changeable but more varied and wiser. He works with those who are not only capable of influencing the future but also able to change the present. Adults are the workers, parents and shpers of a nation. To teach such as these is an honor and an ever-new challenge that calls for the highest abilities of the teaching profession.

FOOTNOTES

[1]U.S. Department of Labor, *Industrial Retraining Programs for Techno-logical Change, A Study of the Performance of Older Workers.* Washington, D.C.: Government Printing Office (in press).

[2]E. L. Thorndike, *Et. al., Adult Learning.* New York: MacMillan Co., 1928.

[3]J. Botwinick and C. Kornetsky, "Age Differences in the Acquisition and Extinction of the GSR." *Journal of Gerontology,* 1960, 15, 83-84.

[4]J. F. Brinley, *Rigidity and the Control of Cognitive Sets in Relation to Age Difference in Speed and Accuracy of Performance.* Doctoral Dissertation, Department of Psychology, Catholic University, Washington, D.C., 1963.

[5]J. E. Birren, K. F. Riegel and D. F. Morrison, "Age Difference in Response Speed as a Function of Controlled Variations of Stimulus Conditions: Evidence of a General Speed Factor." *Gerontologia,* 1962, 6, 1-18.

[6]W. Goldfarb, "An Investigation of Reaction Time in Older Adults and Its Relationship to Certain Mental Test Patterns." New York: Teacher College, Columbia University, Bureau of Publications, *Contributions to Education,* No. 831, 1941.

[7]Wechsler, *The Measurement and Appraisal of Adult Intelligence.* 4th Edition, Williams and Wilkins, 1958.

[8]J. E. Birren and D. F. Morrison, "Analysis of the WAIS Subtests in Relation to Age and Education." *Journal of Gerontology,* 1961, 16, 363-69.

[9]K. F. Riegel, "A Study of the Verbal Achievements of Older Persons." *Journal of Gerontology* 1959, 14, 453-56.

[10]I. Lorge, "Schooling Makes a Difference." *Teachers College Record,* May, 1945.

[11]J. E. Birren, J. Botwinick, A. D. Weiss and D. F. Morrison, "An Analysis of Mental and Perceptual Tests Given to Healthy Elderly Men," in *A Study of Human Aging: Biological and Psychological*

[13]N. Sanford, (ed.) *The American College: A New Psychological and Social Interpretation of Higher Learning.* New York: Wiley, 1962.

[14]R. R. Willoughby, "The Relationship of Emotionality of Age, Sex, and Conjugal Condition." *American Journal of Sociology,* 1937-38, 43, 920-31.

[15]R. B. Cattell, *Personality and Motivation Structure and Measurement.* New York: World, 1957.

[16]L. Lorge, "Thurstone Attitude Scale: 11, The Reliability and Consistency of Younger and Older Intellectual Peers," *Journal of Social Psychology,* May, 1939.

[17]G. Murphy, "Individually in the Learning Process," *Notes and Essays,* No. 12, Chicago: Center for the Study of Liberal Education for Adults, 1955.

[18]E. K. Strong, *Vocational Interests of Men and Women.* California: Stanford University, Press, 1943.

[19]G Davis, *The Prevalence of Hobbies and Their Educational Significance.* Unpublished Ph.D. dissertation, Iowa State University, 1937.

hateful and hostile.

Jersild (19:9) holds with William James (18:291) that the Self is "the sum total of all that man can call his." Jersild (19:9-10) calls the self-concept

. . .a composite of thoughts and feelings which constitute a person's awareness of his individual existence. The Self includes, among other things, a system of ideas, attitudes, values, and commitments in an inner world. The Self is the nucleus of personality. . .

Jersild concludes: "The Self is a person's total subjective environment."

These definitions and explanations of Self are of vital concern in the field of education, particularly in the areas of literacy education and adult basic education. Brookover, Shailer, and Patterson (2:278) report that there is a significant positive correlation between self-concept and performance in the academic role, and that self-concept is "positively and significantly correlated with the perceived evaluations that significant others hold of the student."

Brookover's findings are supported by Bruch and Baldwin (3:181) who write:

Educators have begun to share with clinicians the assumption that relationships exist between certain facets or components of personality and specific abilities, and have operated on this assumption. They found a positive relationship between educational disability and immature self-concept.

Landsman writes:

It (the Self) is the central aspect of personality, consisting of a number of organized, defined objects or ideas, each with a corresponding attitude indicating its adequacy in the eyes of the person who is literally looking at himself and judging himself. Learning... .is determined, influenced, distorted by the (learner's) view of Self. (20:290)

Landsman feels that all learning is internalized more rapidly as it is perceived positively to the learner's aspects of self; and that learning which is related to negative aspects of self is pushed away, avoided, rejected, and only rarely internalized. He defines a well-adjusted person as the Open Self, a man who is free of his past, free of forgotten traumas, free of threatening groups. A well-adjusted person is an effective person, a being capable of approaching new ideas with enthusiasm, and fearing neither failure nor embarrassment.

But the closed self, Landsman says, is constricted, rejecting, fearful of anything new, anticipating failure, and avoiding new experiences. He states:

A series of threatening, frightening school years constricts and closes the self, develops feelings of self worthlessness and continues the vicious circle of avoidance of learning. (20: 294)

Thus it appears important that individuals come to possess what Landsman calls an "open mind," because people learn only because they have found that learning has personal value for them. Fernald

appear apparent. Such being the case, let us look more fully into the concept of the closed mind, which now appears relevant to the learning difficulties of the culturally disadvantaged. In our attempt to further analyze this concept we shall rely, for the most part, upon Rokeach's work in this field.

The Closed Belief-Disbelief System

Rokeach (23), major proponent of the open- and closed-mind hypothesis, feels that there are closed minds in all realms of human effort: politics, religion, the academics of science, philosophy, and even humanistic thought. According to Rokeach, the closed mind persists in a form of ideological dogmatism, "a closed way of thinking which could be associated with any ideology regardless of content, an authoritarian outlook on life, an intolerance toward those with opposing beliefs, and a sufferance of those with similar beliefs." (23:45) The human mind contains a belief system which represents all the beliefs, sets, and expectancies that a person at any given time accepts as true; and a disbelief system, composed of a series of subsystems, disbeliefs, sets, and expectancies, which a person at any given time rejects as false. Rokeach has promulgated certain characteristics of the closed belief-disbelief system, several of which are listed below because they are particularly relevant to a discussion of the learning potential of the culturally disadvantaged:

1. The specific content of primitive beliefs is to the effect that the world one lives in is a threatening one.
2. The formal content of beliefs about authority and about people who hold to systems of authority is to the effect that authority is absolute, and that people are to be accepted and

shall be elaborated upon later. Rokeach further hypothesizes that all belief-disbelief systems serve two conflicting sets of motives:

1. The need for a cognitive framework to know and to understand (which, if stronger than other needs, results in the open mend).
2. The need to ward off threatening aspects of reality (which, if stronger than other needs, results in the closed mind).

Rokeach states:

To varying degrees, individuals may become disposed to accept or to form closed systems of thinking and believing in proportion to the degree to which they are made to feel alone, isolated, and helpless in the world in which they live, and thus anxious of what the future holds in store. These closed systems lead to feelings of guilt, and a disaffected outlook of life. The persons over-identify with absolute authority to defend Self from aloneness, isolation, self-hate and misanthropy. (23:69)

In essence, therefore, the Closed Mind is a system of cognitive defenses against the pain of anxiety; it give rise to the preparation of defense mechanisms of repression, rationalization, denial, projection, reaction formation, and over-identification. Would not the erection of a system of cognitive defenses against anxiety be common to a sub-culture and to a people which feels rejected and deprived by the rest of society? If we lend credence to Rokeach's thesis about the closed mind, we may be able to investigate one of the environments in which the closed mind phenomenon occurs,

nor communicate well enough to earn an adequate income. Most of these reside in urban areas, a result of the increasing migration of rural and farm populations to the city. Mumford (21:8) depicts these encaves as being rife with "dehumanized, purposeless materialism, seamy political life, uncontrolled technology, deteriorating slums, ignorance, tensions and frustrations."

Riese (22:29) finds "appalling numbers of Americans live in isolated status in a society with a total absence of positive stimulation: sensory, motor, mental or emotional. Exposed to terrifying experiences and distorting influences, they meet people whose standards are impressively higher, and a sense of paralyzing inadequacy ensues." In the world of the ghetto, just as in the culturally deprived rural areas where the frantic life of Megalopolis has not yet intruded, the homes of the illiterate, the culturally deprived, and the illiterate-to-be are "crowded with people but barren of objects." (22:46) In these homes were 25,000,000 Americans pursue their existence, several generations may live together, each generation contributing what little economic means it has to support the whole. Constantly on the move, the families lose their identities in the crowds, their living quarters deteriorating with each move from farm to city, from ghetto to city neighborhood, and so on.

Because the home is unattractive, and filled with noise of quarrels, nagging, and worrisome verbalizations, the illiterates-to-be eke out an emotional existence in the streets. The father who bids the offspring farewell in the morning may not be the same "father" who greets the child at night. And with the arrival and departure of each new "father," the mother's personality changes to adapt to the new sexual enviornment. As "fathers" come and go, as the mother's emotional reserves strain

between family setting and the child's cognitive processes. As his emotional burdens interfere each hour with his social interactions with the world about him, the illiterate-to-be begins to construct, single-mindedly a value system, as related to Self, that is distorted and unreal; and the phenomenon of the Closed Mind, as Fernald (12) shows, begins to shelter the personality from the threatening world.

Tracing a second origin of the closed mind in the ghetto, Frenckel-Brunswik maintains that the closed mind is conceived in emotional "ambivalence and the role it plays in the development of the child's personality structure."

> As a result of early parent child relationships involving varying degrees of permissiveness or punitiveness there emerge individual differences in the ability to tolerate emotional ambivalence toward parents, which in turn, spill over into social and cognitive spheres as well. Thus, a person who, through punishment, is not permitted to express his normal ambivalent feelings toward his parents develops a generalized need to structure his world rigidly, a pervasive tendency to premature closure, and a general intolerance of cognitive ambiguity. Such a Closed Mind is equally evident in sterotyped social attitudes toward minority groups, and in restricted and ineffective cognitive functioning. (quoted in 24:16-17)

From the studies and writings of Mumford, Riese and Frenckel-Brunswik, we have been able to describe briefly the socio-economic origins of the closed mind, and of the culturally disadvantaged. Are we now able to establish a linkage between

How can the value dominances of the lower class be related to their relatively higher dogmatism? Frumkin maintains that part of the explanation is due to the intellectual orientation which dominates the lower-class individual. He tends to accept or reject the status quo on the basis of dogma he agrees with or disagrees with, but rarely in terms of scientific and critical examination. In fact, Frumkin feels that the lower-class person has very little real appreciation of what is involved in the scientific method of critical thinking. This is due, in part, to the passive economic and intellectual role required of the lower-class individual.

Frumkin concludes his interesting study with the optimistic observation that "education can help people become less dogmatic, because dogmatism is a function of the level of education: the higher a person advances within the educational complex, the less dogmatic he becomes." (15:401) From this it logically follows that education, by helping to decrease dogmatism in individuals, is aiding one of the most important aims of our democratically oriented society: namely, the creation of the kind of citizen who is more likely to act upon the basis of reason and critical thinking than upon impulse, emotion, and blind acceptance of dogma. However, Frumkin warns that:

> *Low socio-economic status. . .has the effect of maintaining dogmatism in disprivileged groups by preventing the development of the attitudes and opportunities necessary to achieve the critical intelligence needed to reduce dogmatism and achieve some measure of objectivity.* (15:402)

It is apparent from the evidence offered above that for diverse reasons dogmatism is

were high in dogmatism should exhibit less learning in a classroom situation than those who were low in dogmatism. In his tests of learning in the classroom, Ehrlich showed that dogmatism is inversely related to degree of learning. and that the relationship is independent of academic aptitude. Unfortunately, the validity of Ehrlich's conclusions has not been substantiated by subsequent tests; Christensen (7) duplicated Ehrlich's classroom tests, but obtained only null results. Further research in this area appear warranted, as Ehrlich himself indicates.

In a second study, Black (1) indicates that the culturally disadvantaged traditionally are "inflexible, not open to reason about morality, diet, their family polarity, and educational practices. ..." She cites a number of additional traits of the culturally disadvantaged, emphasizing their attitudes of "alienation," and their tendency to "learn through physical, concrete tasks." Black's study is significant because contemporary educational practice for the culturally disadvantaged and the illiterate is oriented very largely upon the student's ability to grasp abstract, not concrete, concepts.

Jackson and Strattner (17) describe the reasons for unexplained variances in learning outcomes which linger after the effects of ability, prior learning, teaching methods and other task related variables have been removed. Their description reveals that:

1. Learning effectiveness is impaired by various forms of psychological pathology;
2. Membership in a socially deprived group or in a stressful family environment creates a threatening situation for them under classroom conditions;

might reduce the learner's awareness or prevent him from accepting new knowledge would be expected to lower the efficiency of his performance. Two classes of conditions are most closely related to these specific effects: the first includes anxiey and related emotions; the second includes *authoritarianism* and other forms of *closed belief systems*.

Thus, in summary, the dogmatism of the low socio-economic peoples may represent an inhibitory factor to learning; and may well inhibit the learning repsonse of the culturally disadvantaged and the illiterate. Perhsps, at this time, we can ascertain in what *ways* dogmatism may interfere with learning.

Personality Characteristics and Learning

As we survey the literature on dogmatism, and on open and closed belief-disbelief systems, let us consider the personality characteristics of the adult basic education student, which may inhibit or interfere with his learning.

One consideration regarding individuals whose closed minds contribute to the illiteracy is the fact that such persons feel that they are being manipulated or victimized by forces beyond their control. Such people, those who feel that their own efforts to have little to do with the good or bad fortune that befalls them, Jackson (16) describes as "alienated." He maintains that the feeling of alienation is directly and importantly related to learning variables, and to the social experience of the learner.

As Jackson indicates, the sense of alienation is common to all persons whose social contacts with the outside world have caused them to create self-images in which are contained beliefs that they cannot exert control over life's factors, a self image that is passive and incapable of reacting to the "slings and arrows of outraged

Alienation, so typical of the ghettos of our major cities, exists at four levels:

1. *First Level,* in which the person feels unable to control facilities and environment.
2. *Second Level,* in which the person no longer feels a need to adhere to society's expectations. At the second level, presumably, deliquency begins: the hub-cap stealing, the gasoline station shake-down.
3. *Third Level,* in which the person refuses to conform to the rules and regulations by which goals are achieved. At this stage, it appears, the youthful criminality begins to harden; the goals and hopes of earlier years fade rapidly away.
4. *Fourth Level,* in which the person rejects or fails to develop a commitment to one or more fundamental values of his society.

As the culturally disadvantaged "progress" from one level to the next higher, the tendency to minimize and defame school values, and to "close" the mind against the school, against education, and against educational and societal goals grows greater and greater. Perhaps, as Jackson (17) believes, the greatest socio-intellectual challenges of our time lie in the area of alienation.

In a second study of alienation Seeman and Evans (24) found that a person's sense of alienation or powerlessness is a factor which affects his response to critical circumstances in his career. In their studies of male tuberculosis patients, Seeman and Evans rated their subjects with an alienation scale that purported to assess a set of expectations for "little control over events." Their results show that patients high in alienation had not learned so

A second personality characteristic of the adult basic learner that might interfere with his learning is dealt with in Dollard and Miller's hypothesis (9) concerning "gradients of approach and avoidance." They maintain that the tendency of an individual to avoid a feared stimulus—in this case, an education, or the school—is stronger the closer the individual is to it. This would account for the fact that in our current efforts to bring education to the nation's illiterates, and to enroll the culturally disadvantaged in basic education programs we often encounter strong and even violent resistance.

A third personality characteristic of the adult basic education student may be contained in the "hostility and anxiety toward authority" which Taylor (26) finds is characteristic of the low achiever. He states:

> The degree to which a student is able to control his anxiety is directly related to his level of achievement, and the student's ability to conform to and/or accept authority demands will determine the amount of academic success. (28:81)

The hostility exhibited by ghetto residents toward authority is legendary. In fact, a major change in curriculum content has been made in the Great Cities Schools Improvement Programs as educators attempt materially to change the adult basic learner's concepts of the policeman and the role of the law in contemporary society.

The phenomenon of "withdrawal" may constitute a fourth symptom of the closed belief-disbelief system of the adult basic learner. Erik Erikson (11) attributes withdrawal to a sense of identity confusion. He defines withdrawal as

Erikson's definition seems to include some parts of Jackson's alienation concept, and some facets of Freud's concept of rejection; and as such, appears to constitute a personality inhibition to learning.

A fifth personality characteristic indicative of the closed mind of the adult basic learner may be found in Feshback and Singer's contention (13) that individuals, when afraid–and members of the low socio-economic classes are reputedly afraid and anxious–tend to judge a stimulus person (the teacher) as fearful; and that instructions from persons in authority designed to inhibit their feelings tend to enhance this effect. Thus, it would appear that the greater the effect exerted by the culturally deprived to approach the threatening school situation, the greater will be his fear of the threatening environment. Conversely, the greater effort exerted by the teacher of school authorities to bring education to the illiterate or to the low socio-economic class member, the more fearful the situation may seem to the prospective student.

Burt (5:24) proposes a sixth personality characteristic of the adult illiterate: "The illiterate is convinced he cannot read. He exhibits continuous feelings of shyness and disability. . . ." Both Burt's observations as to the personality of the illiterate are excellent evidence of the closed belief-disbelief systems of illiterate individuals. Burt's idea suggests an adult illiterate as an individual who is "sold" on his own reading disability, a person whose mind refuses to believe he can read now or ever.

Complete rejection of the desire to develop intellectually may constitute a seventh personality characteristic of the closed mind in the adult illiterate. According to Burman (4), adults on the lower socio-economic levels, training, have no interest whatsoever in intellectual development. The rejection is an inevitable

knowledge, awkward mental attack, inhibited approach to social interactions, and "mental blocks" against the world.

Discussion

In summary, the literature appears to substantiate the belief that there are many personality factors, or characteristics, which may tend to interfere with the learning of adult basic education students. Among these we might include: alienation, avoidance, hostility toward authority, withdrawal, violent aggression, fear of schools, self-image as an illiterate, rejection of the desire to develop intellectually, mental blocks against the world, rigid value systems, and others.

Though the literature is voluminous on the subject, the personality factors inherent in the open-closed mind phenomenon are not the only inhibitors in the illiterate's struggle to obtain an education. In a world he did not make, the illiterate must break out of a caul of defeat, desperation and despair if he is to *achieve*. This caul is compounded of parental failures, societal failures, and the failures of history. The causes of his illiteracy are as number-less as the paving stones of the street he calls home.

When the nation undertakes to bring education to its culturally deprived, it undertakes a staggering task. This task will require a high degree of commitment, and educators must bring new weapons, new resources and new approaches to fight the closed mind—a prime source of the culturally deprived person's resistance to learning.

REFERENCES

1. Black, Mildred H. "Characteristics of the Culturally Deprived Child," *Reading Teacher*, XVIII (March, 1965), pp. 465-471.

2. Brookover, Wilbur, Shailer, Thomas, and Patterson, Ann. "Self-Concept of School Ability and School Achievement," *Sociology of Education*, XXXVII (Spring, 1964), pp. 271-279.

3. Bruch, Max, and Baldwin, Raymond. "The Relationship Between Self-Concept and the Presence and Absence of Scholastic Under-Achievement," *Journal of Clinical Psychology*, XVIII (April, 1962), p. 181.

4. Burman, A. C. "Aspirational Fulfillment Among Adults of Lower Socio-Economic Levels with Implications for Adult Education." *Dissertation Abstracts*, XX (1959), p. 1252.

5. Burt, Cyril. "Education of Illiterate Adults," *British Journal of Educational Psychology*, XV (February, 1945), pp. 37-39.

6. Cass, Angelica. *Adult Elementary Education* (New York: Noble and Noble, 1956), p. 35.

7. Christensen, C. M. "A Note on Dogmatism and Learning," *Journal of Abnormal and Social Psychology*, LXVI, (July, 1962), pp. 75-76.

8. Combs, Arthur, and Snygg, D. *Individual Behavior*, (New York: Harper, 1949), p. 122.

9. Dollard, John, and Miller, Noel E. *Personality and Psychotherapy* (New York: McGraw-Hill Book Company, 1950).

10. Ehrlich, Howard J. "Dogmatism and Learning," *Journal of Abnormal and

sentence will give no help in meaning. In this case one will then refer to the dictionary.

8. Direct Explanation

Many objects are *bouyant* which simply means that they will float on the surface of the water. As you already know, cork or pine float about readily, and even a steel ship will not sink. (In this case the author is directly attempting to make clear the meaning of the unfamiliar word by explaining it and giving examples.)

9. Background of Experience

The *lumberjack* skids the logs on the *bobs* with the use of a *cant-hook*.

In the above example it is apparent that a background of experience is necessary on the part of the reader for a full and complete interpretation of meaning. Where direct contextual aids are not given, the teacher should supply the basis for understanding through excursions, field-trips, pictures, films, slides, museum exhibits, models, and the like.

10. Subjective Clues

a. Tone—

Such a poor, old, gray-haired man as leader! To ask him to serve us again is to murder him. How can we impose ourselves as his worthless children upon such a paternal creature?

This statement, uttered by one who is upholding the virtues

b. Mood—
   All day she sits behind a bright brass rail
   Planning proud journeyings in terms that bring
   Far places near; high-colored words that sing,
   "The Taj Mahal at Agra," "Kashmir's Vale,"
   Spanning wide spaces with her clear details,
   "Sevilla or Fiesole in Spring.
   Through the fiords in June." Her words take wing
   She is the minstrel of the great out-trail.
   At half past five she puts her maps away,
   Pins on a gray, meek hat, and braves the sleet,
   A timid eye on traffic. Duly gray
   The house that harbors her in a gray street,
   The close, sequestered, colorless retreat
   Where she was born, where she will always stay.
   ("The Travel Bureau"—Ruth Comfort Mitchell)

This sense meaning of this poem is incidental to the mood which the author is trying to express, and one can interpret it properly only through that context of mood—in this poem the mood of one living a common-place life, but dreaming of doing great things and seeing fine places.

c. Intent—
   The final score with 509 softball players showed that 3 out of 5 preferred the flavor of Flavor-last gum. The purpose of the writer of this quip is obvious, even without the phrase which might follow—"Get a package today."

In this last group of context clues one sees *meaning* as much

author would have *spoken it?*" "Is what he said what he obviously wanted to say?" "How do you think the author felt; what mood was he in?" "What can you read between the lines that wouldn't be apparent to the casual reader?" "What do you think the author would like to have us do after reading his paragraph?"

Use of Context Clues

One of the most practical uses of context clues is that of helping the child extend his present vocabulary. The dictionary has a place in helping the children to a meaning of unfamiliar words, but teachers would do well to recognize dictionary limitations and to teach their children of them. It is an interesting and instructive exercise to take a text book that children are using, or even the daily paper, and on a particular page have the children suggest words with which they are not entirely familiar. With the list on the blackboard, and the magazine or text at hand, the teacher should carefully read the sentence aloud, asking the pupils to note any clues with the sentence, or in those nearby, that might suggest the meaning of the unknown word. Where the children experience difficulty the teacher should furnish help by pointing out familiar word elements, structural aids, the use of synonyms, and the like. In this manner the pupils will become less dependent on the dictionary, using it only where contextual aids are not available, or where a more precise definition is desired.

Mention was made of the limitation of the dictionary in supplying word meaning. This should have further consideration. Were the meanings of words in a sentence separate and distinct like the posts in a fence, it would be possible to take the definition of each of the words, put them together, and arrive at the meaning. In this case "fresh peach pie" and "fresh peach pie"

between the words, as well as the mood, intent, and tone of the author.

From this one can see that the sheer dictionary definitions might be inadequate to a full meaning that the author is trying to express. But surely a dictionary has some purpose, some value. What is it? Zahner in *Reading in General Education*[3] states the value and limitation of the dictionary well in the following words:

. . .The dictionary lists the literal sense-meanings of the word and some of the metaphorical-sense-meanings which have got into common use. It indicates the present boundaries of the sense-meaning, and within the field drives in several fixed stakes, useful as guide-posts. But it does not exactly place in this field the sense-meaning of the word in any given passage; nor can it give any hint at all of the other kinds of meaning the word may convey—tone, mood, or intent. The common idea that it is the dictionary that "defines" a word, or that gives it its meaning; that the dictionary is the one and final authority as to what in any given instance the word is being used to say; that the matter of understanding and comprehension can be settled by reference to the dictionary, is a common error, and one that is directly or indirectly responsible for some of the common blocks and imperfections in communication and for questionable practice in general education.

True, the dictionary will continue to be a valuable reference book, but its many limitations should be recognized and the pupils led to see that the sentence context itself is at times the best clue to a full and complete meaning.

In spite of the fact that word relationships and, in some cases, the dictionary itself may be utilized as aids to meanings, it must be pointed out that neither the context

Though teachers of primary grades have utilized direct and vicarious experiences to a certain extent, teachers on the upper levels have by no means made sufficient use of them. with the result that much of the learning is sheer verbalism.

As was implied at the outset, the term context clues have been extended to include not only the words that surround a given word, but also those clues to meaning that exist in the past experience of the writer and reader, and those subtly expressed in the tone, mood, and intent of the writer. Moreover, it is not only imperative tha: children know of the existence of context clues, but that they utilize them automatically in their everyday reading. Only by so doing will they be able to transcend ordinarily sense-meaning, and come to a complete understanding and full interpretation of what is being read.

REFERENCES

1. Gray, W. S., and Holmes, Eleanor, *The Development of Meaning*

THE LAUBACH METHOD
by Richard W. Cortright
Director of Education
Laubach Literacy Fund, Inc.

In 1929 few educators in the United States or abroad appeared interested in the illiterates. It was tacitly assumed that there was no appreciable number of illiterates in America. The illiterates, in large numbers at least, were faraway in African jungles, Asian deserts, or on South American mountains. This was the scene as most Americans probably viewed it. But this was also the time when the Hoover Commission was investigating illiteracy in the United States and William S. Gray was preparing a manual for teachers of the illiterates in America.

Faraway, in the Philippines, Frank C. Laubach was preparing a writing system for an obscure Malayo-Polynesian language, Maranaw, a linguistically-structured consonant vowel (cv) language with only four vowels (later to be reinterpreted as five phonemic vowels). The writing of unwritten alphabets was a new skill; a few anthropologists had recorded certain North American Indian languages like Kwakiutl, but not many.

Although trained as a minister and sociologist at Princeton and Columbia Universities, Laubach had set out to found a college or at least a junior college. However, most of the people in the area were illiterate. The difficulty of first making them literate was compounded by the inherent distrust of the Maranaws toward a white foreigner, a distrust by Muslims, who had fought both the Spanish for centuries and the Americans for decades.

only were many Maranaws brought within the family of literate men and women, but also that in time the college for Maranaws was constructed and still exists to offer instruction far beyond the level of minimal literacy.

Since then the widespread use of Laubach methodology in nations of the world's socioeconomically underdeveloped regions have made the method better known abroad than in the United States. Until the end of World War II most of Laubach's educational efforts took place in the emerging nations at the invitation of both government and nongovernment agencies and organizations. During this time adult basic education (literacy) materials were prepared in many languages and in many countries. After the war, work was continued abroad, but a new emphasis was placed on the preparation of materials in English and in the development of specialized educational programs in universities and of short courses known as Laubach Literacy Workshops sponsored by Literacy Councils.[2]

As the result of postwar efforts, the number of languages in which Laubach literacy educational material had been prepared reached 311, and the countries, 103, including most of Asia, all of Latin America, and nearly all of Africa. During this time the Laubach method retained as a popular identification the epithet *Each One Teach One*. However, this term was often narrowly interpreted or even misinterpreted. The term both as a methodology and as a philosophy of education has been explained elsewhere.[3]

A further complication in easily defining the "Laubach method" is the fact that the method has gradually evolved and often changed. Generally, the method has evolved from a simple "key word" method. This form of the method used a few words which contained all of the consonants of Maranaw with the vowel

consonant by a word which began with that consonant. and along the top of the page a similar scheme for the vowels. The result was a matrix of consonant-vowel patterns used for drills of all the possible consonant-vowel patterns in Tamil.

The variation in form of individual letters of such alphabets as Arabic necessitated speical art work to prepare proper configurations, for by the 1940's the principle of configuration, adapted from India, had been incorporated in the chart materials of Laubach-prepared or Laubach-inspired materials. A number of the materials were prepared by associates of Laubach or by others who had gained hold of a copy of some vintage Laubach materials. A further result was that the methodology was interpreted and supposed Laubach material was prepared which only partially justified the appellation of the methodology have taken place, and continue to take place.

To illustrate the Laubach method as it appears in the first book for new adult literates (New Readers or New Audience), current material in Colombian Spanish and American English are useful. The structural differences of a language dictate a variation in methodology. Nevertheless, certain identifiable characteristics predominate and show what are unmistakable Laubach-prepared or Laubach-inspired educational materials. In the Colombian primer, *Hacia una patria mejor, Libro a,* for example, writing is introduced at the beginning. Moreover, rather than the usual introduction of the "a" vowel, letter frequency counts dictate the use of "o." The configuration principle is used; for example, the "c" is superimposed over the picture of the "coco" (coconut), an object familiar to the illiterates. Space is provided for written practice and provision is made for the repetition of each new letter in the context of each new word. Many repetitions are used.[4]

The English language Laubach literacy materials have

Streamlined English.[7] This system, also called "Streamlined Reading," was the basis of the first literacy television series in the United States.[8] The *Streamlined English* series "begins with zero literacy and in the first book brings the student to a high third grade reading ability. Two follow-up books, *A Door Opens* and *Going Forward,* continue the study through the fourth and fifth grades. The *Streamlined English* materials with accompanying large charts are especially useful in individual tutorial situations and in small classes."[9]

Streamlined English was originally prepared for and tested among native English-speaking illiterates in New York City. For nearly twenty years it has been used with various groups in every state in the United States and in many countries as a basic or supplementary textbook in teaching English as a foreign language. Originally *Streamlined English* wa' published without the *Charts and Stories,* the initial phonic component of the Laubach method in English. *Charts and Stories*[10] was first prepared and used in Maryland, later republished as *Reading the Easy TV-Way* in Texas, and most recently revised and republished as the beginning pages of *Streamlined English.*

In order to present salient features of Laubach methodology in English, the following italicized evaluative criteria developed by the Adult Educational Council of Greater Chicago will be used to analyze *Streamlined English.*[11]

1. *Reality of illustrations:* The Hill family is illustrated by simple pen and ink line drawings with minimum shading and perspective with focus on the essential items of the story.

2. *Controlled vocabulary:* a. *Total number of words introduced:* About 1,300 different words are introduced, based upon the Thorndike-Lorge AA and A list,[12] plus several hundred common

or three new sentence patterns are introduced in each chapter.

4. *Controlled paragraph length:* Single sentence paragraphs are used. In the later chapters paragraphs have between seven and twelve sentences.

5. *Number of words on page:* In the early chapters the UNESCO suggestion of a maximum of 50 words per page is followed. In later chapters the number of words varies from 100 to 250.

6. *Sequential treatment of basic skills:* Beyond the early stage of teaching basic reading skills in the introductory chapters, numerous topics are sequentially introduced; some of these topics are health care, consumer education, letter writing, transportation, sight-seeing, community centers, and the P.T.A.

7. *Reinforcement of learning:* Particular attention is paid to feedback and reinforcement in *Building Your Language Power.* In the *Streamlined English* series reinforcement of learning is provided for the learner through a series of review chapters spaced systematically every three chapters and including in closure style a review of the materials previously read.

8. *Adult interest level:* An attempt is made to include topics of an adult nature. *Streamlined English* has also been used with children: the remedial and the retarded. Examples of adult interest topics have been listed under point six.

9. *Recency of publication: Streamlined English* was first published in 1951 and revised in 1955. A new revision is now underway which will greatly extend the *Streamlined English* series. This publication is due in 1966.

10. *Presence and quality of written exercises:* The workbook version of *Streamlined English* appears in *Building Your Language Power.* It is also used as explained under point seven. Reading exercises and tests are presented in *Lesson Plans for Streamlined English.*

there are references to rural life and to such international topics as the atomic bomb.

13. *Presence and quality of teacher's manual:* See point eleven.

In addition to the Ladder of Literacy concept in English as developed in the *Streamlined English* series, two additional kinds of Laubach materials have been prepared. The first is a weekly newspaper, *News For You*, prepared (as of September 1965) on two levels of reading ease.[15] This serial publication is complemented by the second kind of material, a series of adult basic education paperbacks. Sample titles are: *Trouble and the Police*, *We Honor Them* (stories of twenty American Negro leaders), *How to Find a Job*, and *Why You Need Insurance.*[16] The Laubach materials system in adult basic education, recently mentioned in the June issue of *WLB (p. 885 ff)*, has been introduced into the North Carolina state adult basic education program. In addition the Laubach materials system is being used nationwide. These materials, along with others, are described in the annotated bibliography by Jeanette Smith.[17]

For the first time a public library has initiated a teaching program of adult basic education under library sponsorship. This program has been described in the newsletter of the McIntire Public Library, Charlottesville, Virginia.[18] Librarians as individuals have taken part in literacy workshops and literacy councils. In Alabama adult basic education programs were held at a local library. In Cleveland, New York, and Montgomery County, Maryland, special shelves of adult basic educational materials have been arranged for distribution.

Laubach methodology has evolved during its first thirty-seven years. The Laubach materials initiated in the Gold Coast and now used in the modern Ghanaian plans for total literacy, are a testament to the widespread government use of the Laubach method

FOOTNOTES

1. Frank C. and Robert S. Laubach, *Toward World Literacy*. Syracuse, N.Y : Syracuse University Press, 1961. See particularly chapters one, two, and three. Also see Frank C. Laubach, *Thirty Years With the Silent Billion*. Westwood, N.J.: Fleming Revell Company, 1960.

2. Richard W. Cortright, *Literacy USA: A Handbook for Americans*, Syracuse, N.Y.: New Readers Press, 1964.

3. Richard W. Cortright, "The Right to Read," *Elementary English*, March 1963, pp. 299-302.

4. "Learn Laubach Literacy: What is the Laubach Method?" Washington, D.C.: Laubach Literacy, Inc., 1965. This pamphlet describes the nine-point procedure in preparing Laubach materials with illustrations from the 1964 Portuguese primer, *Podemos Ler*.

5. Frank C. Laubach, *Building Your Language Power*, Morristown, N.J.: Silver Burdett Company, 1965. 6 volumes.

6. Frank C. Laubach, *Learn English the New Way*. Syracuse, N.Y.: New Readers Press, 1964. Book I, Book II, and student's workbook.

7. Frank C. Laubach, *Streamlined English*. New York: The Macmillan Company, 1955.

8. Nell Peerson, *An Experiment, With Evaluation, in the Eradication of Adult Illiteracy by Use of Television Instruction Over a State Education Television Network Supplemented by Supervised Group Viewing and by Related Use of Project-Supplied Materials of Instruction*, Title VII Project Number 417 NDEA Grant Number 701080. Washington, D.C.: Health, Education and Welfare, August 1961.

9. Robert S. Laubach, "Beginning Reading Materials for English Speaking

11. Ann Hayes, Nancy Lighthall, Dan Lupton, *An Investigation of Materials and Methods for the Introductory Stage of Adult Literacy Education*, Adult Educational Council of Greater Chicago, issued by the Office of the Superintendent of Public Instruction, n.d.

12. Edward L. Throndike and Irving Lorge, *The Teacher's Word Book of 30,000 Words*. New York: Teachers College, Columbia University, 1944.

13. Frank C. Laubach, *Teacher's Manual for Streamlined English*. New York: The Macmillan Company, 1960. See particularly pp. 1-8.

14. Frank C. Laubach, *Lesson Plans for Streamlined English*. Syracuse, N.Y.: New Readers Press, 1962.

15. *News For You*. Newspaper in easy English for adults, published weekly during the school year, Syracuse, N.Y.: New Readers Press.

16. Adult basic education paperbacks are published by the New Readers Press, Box 131, Syracuse, N.Y. 13210.

17. Jeanette Smith, *Books for New Readers, A Bibliography*. Syracuse: New Readers Press, 1964.

18. *Among Friends*. Newsletter of the Friends of the McIntire Public Library, 1, No. 3, Charlottesville, Va., Dec. 21, 1964. Copies of this newsletter are available from Laubach Literacy, 2000 P Street, N.W., Washington, D.C. 20036.

19. Cyril O. Houle's foreword to "Rural Mimeo Newspapers" by Robert de T. Lawrence, *Reports and Papers on Mass Communication*, No. 45, UNESCO, 1965, p. 5.

THE AUDIO-LINGUAL APPROACH AND
THE RETARDED READER
by Jack B. Krail

A great deal of time, effort and money is currently being extended on the construction of reading materials for adults of 18-19 who are reading between the third- and sixth-grade levels. By far the largest part of this group comes from homes in which reading is at best passively discouraged. Most of these homes are almost entirely (if not, indeed, entirely) without books. Many of the children have access to no more than their school texts and perhaps to a tabloid-type newspaper. Too many of the texts used in classes are so unrelated to the actuality of daily life that reading them often becomes an exercise in frustration.

These children do not see their parents read, and, certainly, their peer-group culture is often an active deterrent to reading. In short, nothing in the out-of-school enviornment of these boys and girls encourages them to read. And yet, unless they do begin to read at a rather early age and unless they continue reading in order to develop this skill, they are almost certainly doomed to failure in their school work and to the harshly abrasive consequences that follow: unskilled labor, or, more probably, unemployment. The foregoing is not meant to imply that failure to acquire the reading skill is the only factor that prevents these potentially retarded readers from leaving the slough of the disadvantaged, but a pretty good case could be made for this being practically a *sine qua non.*

One aspect of this extremely acute problem is the vital importance of the age at which the child starts to read. To digress for a moment: it appears to be a fairly well established fact that

Most of our trainees are the victims of social and economic ills which have isolated them from the cultural mainstream. In their isolation they have developed a sub-culture of their own in which they have learned to function quite efficiently. This sub-culture is not necessarily a lesser culture than that of the mainstream, but it is different. An exchange between the two "cultures" can only result from an open-door policy. The first step in this direction is vocational retraining for economic independence. Reading is an integral part of this retraining process to build a contextual bridge connecting the two cultures. You cannot teach people to read in a language or life context which is alien to them. The intransigence of the main culture in meeting the contextual needs of the sub-culture has been a major cause of reading failure in our schools. We, therefore, are developing reading material which is helping to provide the necessary contextual bridge.

An often overlooked factor which contributes to the alarming number of reading failures is distorted visual perception. A number of trainees with reading problems displayed symptoms of dysphasia (speech difficulty) and dyslexia (reading difficulty) due to brain damage. Other trainees had problems relating to dominance, especially lateral dominance (motor acts involving preferred use of organs of sight and hearing on the same side). Although the symptoms of lateral dominance in adults can be very deceptive, it may be suspected when there is a consistent pattern. Therefore, much of the methodology which we have developed was designed to cope with problems caused by laterality and other visual perception distortions.

Materials

attempt to arrange, grade, and organize this adult material in a teaching sequence based on language frequency. Ours is, as far as we know, the only adult curriculum of its kind. The success which we enjoyed in the early stages, when we introduced language and subject matter which was familiar to our trainees and suited to their vocational needs, clearly dictated the steps which had to be taken. Because the trainees are adult and time is limited in the Manpower Development Training Program, there is an urgent need for the rapid development and testing of new materials and methods.

The adult teaching sequence and the supplementary reading selections are being developed in three phases. The first phase is designed for the total illiterate who has no symbol recognition. The use of vocational terms to build a sight vocabulary is particularly rewarding on this level. The terms provide us with an excellent contextual key and are not, as one might imagine, limiting. Trainees find terms like "car battery" "stalled car", and "carburetor" much easier to recognize and remember than "ride the car around and around the yard", "bat the ball", or "Paul hit the ball".

The auto service trainees found that "fix the flat tire", "can of oil", "the tools on the workbench", "four-door sedan", and "jam on the brakes" were especially meaningful. Similarly, terms such as "pot of glue", "hammer and nails", "claw hammer", "build a table top", "tool kit", and "shop foreman", are not only necessary for woodworking and metal fabrication trainees, but also contain important sound symbols essential for reading. The trainees who had failed to learn these sounds in the child-oriented books were now able to retain them in this more contextually valid setting

practical because of the spelling control which this alphabet gives us. We recognize that it is not the function of any alphabet to teach reading. However, an alphabet which provides a reliable sight-sound spelling base can make a monumental contribution to the teaching of reading. The need for such an alphabet in English has been felt for hundreds of years.

In the second phase, the materials, the teaching sequence, and the reading selections are designed for functional illiterates. The reading selections follow the same pattern as those in the first phase, except that they are much more sophisticated and difficult. Good context seems to make even difficult selections understandable for the trainees.

Mots i/t/a referrals at Brooklyn Adult Training Center fall into the functional illiterate category. In our program, most functional illiterates have reliable consonant recognition, a sight vocabulary of between 150 and 200 words, and no reading skills. As adults, however, they possess language skills and experience. We attempt to exploit these very important strengths. These are the "ready for reading" assets which form the base for the teaching of reading skills. While some trainees lack auditory discrimination because they have never learned to read, others have very good auditory discrimination despite this developmental gap. We have found that learning to read is possible for an adult, even when auditory discrimination is poor. But the teaching procedure is altered to capitalize on sight and context where auditory discrimination is lacking. Good reading results are achieved by using an area of strength while developing skill in an area of weakness.

The third phase is the transition stage in which the reading

reason for the ease of transition is that the crippling reading disability has been repaired and replaced with a body of reading skills which are essentially the same as those necessary for any effective reading.

Reading skills such as word analysis, sight vocabulary development, and use of contextual clues, all of which have been practiced in reading materials in the Pitman alphabet, are exactly the same skills necessary for reading in traditional orthography. The fruits of i/t/a remediation are enjoyed when students transfer into regular reading classes. All of our teachers have marvelled at the superior word analysis skills of i/t/a students. The insights gained from the experimental teaching of reading to adults in i/t/a classes is now being applied to all the reading classes in our Basic Education Department.

Our original methods and materials are being adapted for readers on the fourth to sixth grade levels. New materials for this intermediate group, following i/t/a guide lines, are being developed. They link the earliest stages of reading remediation with the more advanced in a coordinated reading program.

Methodology

Appropriate methodology and material are mutually reinforcing in remediation. Phonogram combinations and early use of vocationally oriented phrases are the basis of i/t/a teaching. Vowel sounds are never taught in isolation, but rather in a phonogram combination. The short vowel sounds in isolation seem to be too abstract and are mastered more rapidly when taught in combination with a consonant. Combinations such as "in", "it", and "if", are identifiable both by sight and sound. Movement to the less familiar "ick" and "ig" seems to be easier when

position, as in "tig-welding," or "jig-saw." The calculated movement of these sound combinations is extremely valuable in teaching trainees with problems of laterality. The linguistic advantage of the early use of phrases is enhanced by the left-to-right eye movements which these phrases help to develop.

In small i/t/a classes the teacher is able to follow the step-by-step progress of each trainee. Testing facilities make it possible to weigh findings with greater accuracy and objectivity. The standardized reading tests which have been administered include word recog ition and timed silent reading tests. On the basis of scores for an eighteen-month period, we estimate that approximately seventy percent of the i/t/a trainees leave Brooklyn Adult Training Center with word recognition skills ranging between sixth and seventh grade. In most cases this represents a four to five-year reading advance within the six-month remedial period. The timed silent reading tests, however, reflect an average of two year's growth in reading.

Case Histories

The following are accounts of several trainees who were helped by i/t/a to previously unattainable vocational and educational opportunities. A young i/t/a trainee with severe laterality has progressed into a transition class. The reading skills which he acquired made it possible for him to become an i/t/a typist. He has typed many reading selections which are used in the i/t/a classes and he may become employable in the highly specialized field of i/t/a typing.

Sarah B., an early i/t/a trainee. itered the program with a grade reading score of 3.4. Upon termi ation, six months later, her
 more level was higher than seven. After an absence of almost a

at Brooklyn Adult Training Center he was retested and scored about eighth grade level.

Wayne B. was afflicted with severe dyslexia as a result of brain injury. Through i/t/a remediation his reading improved sufficiently for him to be admitted for training as a draftsman. With financial assistance from the New York State Division of Vocational Rehabilitation, he is studying advanced mathematics and drafting and is performing extremely well.

Conclusions

The success at Brooklyn Adult Training Center with the first Initial Teaching Alphabet Remedial Reading Program for Adults was largely attributable to the dedication of the teaching staff. The instructors have personality traits that enable them to establish a high level of rapport with trainees. While the quality of the teaching and the relationship between students and teachers in a remedial procedure are of crucial importance, there are several equally important contributory factors. Even the most dedicated and humane teachers must have the proper orientation, methodology, and materials in order to perform successfully. Remediation is, without a doubt, the most challenging of all teaching disciplines and demands teaching disciplines and demands teaching excellence. Our experience at Brooklyn Adult Training Center has shown that skilled teachers with a wide variety of personality differences can achieve equal success using the same methodology and materials.

This report of the collective effort with i/t/a at Brooklyn Adult Training Center is the beginning of what, we hope, will lead to further progress in eliminating illiteracy.

was our feeling that this gap might in some measure be due to the limited quantity of adult reading materials available, and the limited adult reading experience which we were therefore able to provide during the remediational period. What seemed to us to be a major void was the absence of contextually suited reading selections in sufficient quantities to build the sight vocabulary and contextual reading skills which are necessary to maek a competent reader. This caused us to begin a program for the development of new, vocationally-oriented adult materials, in a large variety levels of difficulty. It was our hope that replacing the child-oriented selections with these adult materials would provide our i/t/a trainees with sufficient reading experience to compensate for the short remediational period.

The trainees, whose reading growth is described in the table below, began their i/t/a remediation at the end of June, 1966. Originally, they were divided into two groups of five and six trainees. The adult materials used in our curriculum were developed during the *seventeen weeks* of their remediation. These two groups were the first to complete the remedial reading program on a complete diet of adult materials. However the need for new materials and the revision of those already prepared continues.

Trainee		Vocational Group	Intake Reading Score	Spache Silent Reading Comprehension after 17 weeks	Spache Word Recognition List 3 after 17 weeks
1.	B.M.	Merchandising	3.5	7.0	5.5
2.	Th.M.	Machine Shop***	Illiterate-untestable	7.0	5.5
3.	P.W.	Machine Shop	3.5	8.5	6.5*
4.	R.P.	Woodworking	3.8	8.5	6.5*
5.	H.A.	Machine Shop	3.0	7.0	6.5*
6.	S.P.	Metal Fabrication	3.5	7.0	6.5*

Three of the original eleven trainees left school before the retests were administered and were unavailable to us.

The improved performance of the June trainees in the silent reading comprehension test is, we think, in large measure the result of the adult diet to which they were exposed. In the seventeen weeks of their training they were reading *no child-oriented* or contextually remote materials. As the volume of materials increases, we should be able to provide sufficient quantities of reading selections to maintain an active interest in reading, and to compensate for the comparatively short period of exposure of remediation.

Four of the trainees whose scores are included in this table have declared their intention of preparing for the high school equivalency test. While their new-found reading skills have left them somewhat dazzled about their vocational future, they are all reevaluating their vocational opportunities in light of their advanced skills. All of the trainees have become avid independent readers and library members and have in fact added a new dimension to their living.

PART IV

COMPREHENSION

WHAT IS READING COMPREHENSION?
A RESEARCH VIEW
William D. Sheldon

What is reading comprehension? I want to say for the sake of argument that reading comprehension is the ability to interpret what is read and requires a different pattern or arrangement of closely related factors or skills in each of the content fields. The problem in the research to date is that the factors are so closely related they seem to be one, or perhaps two. The two studies which I think are most comprehensive in the field of sayir g what i. reading comprehension are those of Fred Davis done in r iation-ship to the *Cooperative English Test of Reading* and the second the replication of that particular piece of research by Lyman Hunt done under my direction at Syracuse some years ago. Hunt raised these questions: Does the reader in the usual situation use mental functions or processes which are sufficiently different to reflect a described difference? This is the nub of the problem in terms of what Hunt and others have done. And secondly, do individual readers vary in either their ability or proficiency to use described skills of comprehension to such an extent that we can measure them with existing measures? Third, can we assemble groups of items which are true measures of the described abilities or skills? And then lastly, does each item group measure one designated skill in a manner that is significantly different from its power to measure other skills? Whether we can measure the specific aspects of comprehension still remains controversial in the mind of Hunt

all called facetiously by one scholar item X, an eclectric over-all skill which seemed to be important to Hunt and to others but could not be discretely measured. The third element is one that accounted for only 3 per cent of the total variance, not enough to really be called a discrete factor, and that is the matter of organizing ability. Now what this means is that thy person who goes into the comprehending of written material seems to elicit his understanding—and therefore relating to my definition of what reading comprehension is (makes reading comprehension descriptive in a sense)—when he's able to understand the meaning of the words involved, when he has the power to do something with the materials in an organizational sense, and, lastly, has the ability to do some thinking that might be new or reflective upon the subject to ensue. Perhaps reading comprehension might be described as a goad to replicated thinking or a goad to new thinking on a topic that is either known or partially known.

Some people say that you cannot understand something with which you are totally unfamiliar and that reading comprehension suggests that the reading act allows you to become familiar with materials which you already knew in other ways either partially or wholly. What I'm saying in effect is that there seem to be some masses of understanding, concept-wise, in the individual which become clearly defined in written materials and which the individual now relates to his mass of information through his reading. So reading comprehension might merely be a tool by which a person relates information known or partly known. We know of course that individuals can't have a full knowledge of everything they read, but I suspect that unless they have a fairly adequate understanding, which they gained in other ways, of the concepts involved in the reading, the words which describe those

level with the topic to be read. Now I'm going to suggest that the purpose for most the reading done by the children we know is something which is artificially contrived and, like much of education, the purposes derive more from the situation and the teacher than from the learner. I wor l like to suggest to you that if a person has enough ability or umen to develop his own purposes for reading that this in itself might be the overpowering factor which would describe what reading comprehension is. In this case the process would determine the effort and the amount of will, in a sense, to pursue material until it was comprehended or understood. Let me give you example. The best specific related to this is the pursuit of nowledgeable youngster into a new topic of interest, one tha presented to him perhaps by television, by conversation, or in some other way. We encounter this in particular in the intermediate grades, when youngsters are interested in such things as space and dinosaurs and the rest. It is virtually unbelievable what these youngsters can comprehend in terms of their measured ability to read in other areas not related to the interest area. When their purposes are such that they will not spare themselves in driving toward understanding, it is incredible what they can do with a relatively limited reading ability. For example, the pursuit of terminology is one of the first steps the young scholar takes. He wants definition. He break down terms which many of us have not taken the time to learn. *Brontosaurus* becomes easier than *cat,* or so it seems. *Apogee* enters the vocabulary more quickly than the word *their.* It seems ridiculous at times, when we consider what purpose will do, that we don't allow the readers' purpose to govern much of our instruction in the area of comprehension. What I'm saying is that purpose which is usually arbitrarily determined by the teacher is

familiarity. Here we think of comprehension. or what is co/ `prehension, as perhaps the capstone to a clarification of the concepts involved in materials.

So far as I'm concerned, reading comprehension is an illusive state which cannot apparently be so measured that we can adequately answer those four questions raised by Hunt. Let me review them. Hunt's questions are these, and I think they're pertinent to this particular topic. Does the reader in usual reading situations use mental functions or processes which are sufficiently different to reflect described differences—and the described differences here are on the part of the examiner who has labeled different parts of comprehension tests as measuring discrete elements of comprehension. (I want to recite just briefly those parts. Knowledge of word meaning is almost always one. The ability to select word meanings from context is a second. The ability to follow the organization of a passage is third. The ability to select the main idea is fourth. The ability to answer questions directly answered in the passage, fifth. The ability to answer questions that are answered in the passage but not in the words in which the question is asked, sixth. The ability to recognize literary devices used in the passage to get its tone and mood, seventh. The ability to draw inferences about its content is eighth. And lastly, that highly intellectual skill of determining a writer's purpose, point of view, and to draw inferences about the writer himself. Those are the described differences in a sense that Hunt has discovered.) Secondly, do individual readers vary in either their ability or proficiency to use described skills of comprehension to such an extent that we can measure them with the existing measures? A suggestion again comes quite clear: The answer is no. Three, can we assemble groups of items which are true measures of

TEACHERS. QUESTIONS AND COMPREHENSION

Following the categories of questions discussed in the excellent book on this subject by Sanders. This book, *Classroom Questions: What Kinds?* presents its subject in much greater detail than we can here. It will be very profitable reading for any teacher attempting to improve her interaction with pupils, particularly when teaching in the content fields.

1. Memory—recognizing or recalling information as given in the passage. Sanders distinguishes four kinds of ideas on the memory level of thinking:

   (a) facts—

   Who did _____?

   When did _____?

   How many _____?

   What are _____?

   (b) definitions of terms used, and perhaps explained, in the text—

   What is meant by _____?

   What does _ _____ mean?

   What meaning did you understand for _____?

   Define _____.

   Explain what we meant by _____.

   (c) generalizations—recognizing common characteristic of a group of ideas or things

   What events lead to _____?

   In what three ways do _____

(d) values—a judgment of quality

What is said about _____?

    Do you agree?

What kind of a boy was _____?

What did _____ do that you wouldn't?

2. Translations--expressing ideas in different form or language

Tell me in your own words how _____?

What kind of a drawing could you make to illustrate _____?

How could we restate _____?

Could we make up a play to tell this story? How?

What does the writer mean by the phrase _____?

Write a story pretending you are _____.

3. Interpretation—trying to see relationships among facts, generalizations, values, etc. Sanders recognizes several types of interpretation

(a) Comparative—are ideas the same, different, related or opposed

How is _____ like _____?

Is _____ the same as _____?

    Why not?

Which three _____ are most alike in _____?

Compare _____ with _____ in _____.

How does _____ today resemble _____ in _____?

(b) Implications—arriving at an idea which depends upon evidence in the reading passage.

What will _____ and _____ lead to?

What justification for _____ does the author give?

If _____ continues to _____, what is likely to happen?

(c) Inductive thinking—applying a generalization to a group of observed facts

> What facts in the story tend to support the idea that _____?
>
> What is the author trying to tell you by _____?
>
> What does the behavior of _____ tell you about him?
>
> What events led to _____?
> Why?

(d) Quantitative—using a number of facts to reach a a conclusion

> How much has _____ increased?
>
> What conclusions can you draw from the table (graph) on page _____?
>
> How many time did _____ do _____?
> Then what happened?
>
> How many causes of _____ can you list?

(e) Cause and Effect—recognizing the events leading to a happening

> Why did the boy _____?
>
> How did the boy make _____ happen?
>
> What two things lead up to _____?
>
> When the girl _____, what had to happen?
>
> Why did _____ happen?

4. Application—solving a problem that required the use of generalizations, facts, values and other appropriate types of thinking

> How can we show that we need a traffic police-man at the crossing at the south end of our school?
>
> If we want to raise hamsters in our classroom, what sort of plans will we have to make?
>
> John has been ill for several days. What could we do to help him during his illness? To whow him we think of him?

5. Analysis—recognizing and applying rules of logic to solution of a problem; analyzing an example of

Discuss the statement, "All teachers are kind and friendly."

Some people think that boys can run faster than girls. What do you think?

John was once bitten by a dog. Now John dislikes all dogs. Is he right or wrong in his feelings? Why?

6. Synthesis—using original, creative thinking to solve a problem

What other titles could you think of for this story?

What other ending can you think of for this story?

If John had not _____, what might have happened?

Pretend you are a manufacturer of pencils who wishes to produce a much better pencil. Tell what you might do.

7. Evaluation—making judgments based on clearly defined standards

Did you enjoy the story of _____? For what reasons?

What do you think of _____ in this story? Do you approve of his actions?

In the textbook, the author tells us that _____ felt _____. Is this a fact or the author's opinion? How do you know?

This story has a very happy ending. Should all stories end happily? Why not?

The author of our textbook apparently believes that the American colonists were right in their actions. Do you agree? Waht do you suppose the British said about the colonists?

Write a short story about your favorite person in history. Tell why this person is your favorite.

this, we have tried to provide a depth of background for
cher who is attempting to improve comprehension. As we
nown again and again, comprehension and critical reading
des of thinking which are taught by the stimulus of the
ion in the classroom. We did not provide examples of "good
hension exercises" as most reading textbooks do. We
that such printed exercises or tests have a place in the
ment of comprehension, but a minor part to be sure. What
e tried to show is that if employed, such exercises must be
electively, critically in fact, by the teacher. All too often
ercises sample only the simplest types of thinking, memory
ot-like recall of details.
or can such an approach to teaching comprehension be
d because it appears to enable students to score better on
tests. The broader concept of comprehension we are
ing will also accomplish this short-sighted goal, as well as
te the development of comprehension and critical reading in

e intended to present the complete picture of thinking in
, to encourage teachers to make exercises and tests and ask
ns which cover the entire gamut of cognitive processes.
pment of any real depth of comprehension or the faculty of
ent, critical reading is impossible, if we depend upon drill
workbooks and other stereotyped, repetitive materials. Our
will be reached only by diversifying ou questioning con-
, and by including on almost every occasion, as many as
e of the types of stimuli to thinking we have outlined

THE NEWSPAPER: A NEW TEXTBOOK EVERY DAY
Laura S. Johnson

A basic requirement in the ESEA Title III grant for the establishment of a Diagnostic and Remedial Learning Center in our school (2) last year, was that it be innovative. My part in the program was to work, through language processes with emphasis on reading, on a one-to-one basis with twenty students (all except two of them being boys ranging in age from sixteen to nineteen years) who were having learning difficulties in high school. Their trouble ranged from underachievement to severe misbehavior, and their number represented only a small fraction of that much larger group also having trouble achieving academically. With these few individuals, however, I hoped to evolve a rationale for the selection of materials, and I hoped to work out techniques for using them which could be adapted to larger groups. I believed that maximum effective individualization of reading instruction could be achieved through the types of materials constantly available to students rather than through the number of teachers constantly available to students.

When I began, some of the students, though conscientious and still willing to try, were very discouraged with their past performance; they had just about given up hope of ever having anything good happen to them in school. That they did learn to feel better about themselves and their ability to achieve was summed up by one of them near the end of the year when he said, "At the beginning the picture was pretty sad, but now things are looking up."

Others in the group seemed headed straight down the drop-out trail, unless the pushout trail came up first because of their obnoxious behavior. One of them put it this way when he showed up: "There ain't a rule this school can make, that I can't think of a dozen ways to break."

Their economic and social backgrounds were varied, ranging from the bottom to the top of the occupational scale. One was Mexican-American; the rest were white. All had average and above-average mental ability. Most of them had attended "good" suburban schools during their elementary and junior high school years. They had been exposed to the advantages considered prime requisites for success in school, but few had "taken." For high school students, all of them were poor readers. On a Triggs Survey Test given when they entered the program, their scores ranged from third to seventh grade reading level; WRAT scores in arithmetic and spelling were correspondingly low. All of them could be expected to have difficulty attaining even nominal success in the structure of the traditionally elite-oriented secondary school; most of them were failing or ready to drop out.

The Detroit Tests of Learning Aptitude indicated perceptual handicaps for all of them. For most, the deficiencies were visual or auditory. Two of them had considerable disorientation. Two were physically immature for their age. And so it went on down the list. As our staff met and discussed the students individually as well as collectively, their problems became more complex the further we went into them because of the emotional overlay of years of failure and frustration piled upon years of educational neglect of their specific impairments. Our staff members became more aware, too, that we were hovering with less distinction over the fine line separating the semantics of Learning Disabilities from what we became more inclined to term Learning Difficulties. Finally our psychologist resolved the problem of identification by saying, "Look! These kids are in trouble. Let's see what we can do to help them and forget about what to call it."

So I did, and took my cues for what to do for them by listening to what they said as they introduced themselves to me the first week of school (it took that long for some of them to show up).

"Don't gimme none of this jazz about readin', unnerstan', 'cause I ain't takin' none of it, ya unnerstan'?"

"If this is some more of the same old hash, no thank you. I'm

give him one."

"Who needs to read? I say, Babe, keep your eyes and ears open, and you can get along."

"Read a book? Why should I? The good ones are made into movies and they're a whole lot easier on the eyes."

"My counselor is an old ***. She says I'm stupid 'cause I can't read."

"You want to know something? I'm going to slit that *** teacher's throat if she asks me again, 'Where's your book?' "

Innovate?

What else could I do?

Whatever happens, I thought, it must not look like school or sound like school. But it must open up again the chance to learn, and it must arouse a willingness to learn. I must understand the desperation, the boredom, the ignorance, the bravado, and the hostility which their words express about the school's impact upon them. What in it felled them, I wondered? Where, along the way, did proportion get lost? Was it the school or their dear families, or both, that failed to show them, like the elephant's child in the *Just-So Stories*, the fun and the fact in learning? It was too late now for this, but perhaps something else would work. So I plunged into the jungle around me and searched for what might help this yowly, scowly bunch lacking in manners and with their curiosity not showing.

I began with a local, tabloid-sized morning newspaper, the *Chicago Sun-Times*. It was right for this group for many reasons. For one thing, it did not look insulting. The students were not ashamed to walk down the hall with it under an arm or on top of a pile of books. It was not, as one of them said when he disdainfully pitched a workbook from another class into my wastepaper basket, "Kid stuff!"

The newspaper was good, too, because it looked fresh and easy to handle. It kept the reading process from seeming "too big," "too complicated," "dry," "boring," "stupid," or any of the other adjectives a high school person wouldn't be caught dead with. The day's newspaper appealed to them also because it was

about it on his "Tonight Show"; their favorite DJ worked it in while he switched from The Cream to Jimi Hendrix.

Also, for high-interest, easy-reading, the staff downtown in the *Sun-Times* office could always be counted on to furnish that touch of professionalism the kids expected in every phase of their living, for television has brought them up on it, and they turn off on anything that doesn't come up to the same sleek standard. Also, where for four cents can you get such an unbelievable windfall? You think you must be dreaming. But what a dream! Stacked, bundled, wired—you find it waiting for you every morning you enter the school office and prepare to face your students that day. The only thing that bothers you is that this feast should be available for the hundred kids who need it rather than the few who will get it.

The newspaper we used always had at least one eye-catching picture on the front page; sometimes it had two. A big, one-inch headline slammed the main story right into the eye. Smaller, half-inch heads on page two kindled curiosity on other major news events. Clear directions led further into the paper when a story was continued, thus exposing the students to additional happenings.

Mike, caught by an item on Khe Sahn on page one, inevitably continues to "Story on page five" because his brother is in Viet Nam. When he finishes this, he finds right next to it an article about the possibility of higher rates coming up for the tollway. Mike reads that too because he drives a car, and all the costs come out of his pocket. Abe follows the missile crisis on through "Report on page four" because his grandfather lives near Liberty-ville, and no one in their family wants an ABM site that close. This item ends just above another about an eccentric who has 23 cats, which brings a snort from Abe: his step-mother has three Siamese, and he hates all four of them. Sam, a guitarist, gets carried away by "See page 17," where he reads about the 50,000 persons who turned out the night before to hear the Jefferson Airplane in Grant Park. Sam's eye is pulled further on to a nearby column where he reads a social worker's complaint about the inadequacy

freely through it the first half of the period every day. Each boy avidly reads what appeals to him; he responds to it; and he moves on to read some more, to respond again—to awaken, he eventually realizes, to words, to thought, to organization, to communication—first with himself and then with other people.

Though each of these students needs some very elementary and repetitious drills for building up strength in his own perceptual weaknesses, none is motivated enough at this late point in his schooling to take them on. To present these bald exercises to them now would be to turn them off on what I might be able to stir them up to do for themselves. So I approach them through something they will take, and I adapt it to what they need.

They take to the newspaper because it appeals to them personally in its awareness of what is going on today and because of its ability to change when tomorrow comes. It is not dead or frozen or stuck or creeping. It is alive and jet-propelled. Television, speeds of 25,000 miles per hour, trips to the moon, pictures of life (?) on Mars—this is the perceptual level of newspapers and students today; both "feel" to *Apollo 11*, not the *Santa Maria*. Students to not even see or hear the blank look and the dull pace of the hard-covered textbook which is one, two, three, or five years old. Their time is now and tomorrow—not yesterday or last year.

So they will read, listen to, and look at what's new and up-to-date. It is only *after* they have accepted this, and *after* they have some kind of "readiness" appropriate to their age and interest that they are able to start asking questions about what came before. It is only then that they will want to turn to the kind of reading which supplies in-depth answers, which gives them the relationships they as human beings instinctively seek. It is then that they find reading to be a way of life rather than just a subject taught with "package deals." Once they discover the thrill of making their own connections through reading, they will not stop. The path which begins with Ann Landers' daily column in the newspaper can widen into the broader expanse of *Mr and Mrs. BoJo Jones*, and that can elevate to the vista of *The Scarlet Letter*. For the poor high school reader, a sequence like this is absolutely

culmination is to ruin the entire thing.

The boys whose bag is sports know where to start. They begin on the back page of the newspaper. For them, what the President said yesterday is nowhere near as important as what big Lou scored last night on the basketball court. For the sports lover, the newspaper is customized reading right down to the last percentage point: readiness, motivation, and content are all tailored exactly to their demands.

When their favorite hockey player's jaw is busted in the game between the Hawks and the Canadians, the boys get a sustained look at the fracas through the photographer's blowup. With no outside prodding, the fellows jostle each other for a chance to read aloud the thrilling story. I never have to squeeze interpretive analyses out of this group: the phenomena simply exude.

"What a guy! His jaw is going to be wired shut for eight weeks."

"How do you s'pose he's going to eat?"

"They'll think of something. They sure as heck won't let a million dollar guy like that starve to death."

"You know what? I betcha he never misses a game."

"Good old Bobby! Ain't he the greatest!"

At first none of them believed that a newspaper was going to be their textbook. They were skeptical. They looked for the catch. They braced themselves for the yank of the rug. But by the end of the first week, the old-shoe comfort of a newspaper began to produce the relaxing effect they had to have to get on with the business of finding out what else they wanted (and needed) to know. Finally, and with nothing said about it, they knew there wasn't any catch. This was for real. The whole thing was just as good as it looked.

They liked the period in their school day when they could come into a room, sit down, pick up a fresh newspaper, and know it was theirs to do with as they pleased. They could read it, talk about it, write about it, cut it up, tear things out of it, take it home—such personal freedom with print existed nowhere else at school, and often not at home either—it was wholly theirs. When

did not know, he spelled it out and someone told him what it was. I made a note of these words so that they could be written on the board for analysis and discussion after the reading was finished and the conversing had begun.

We did a lot of talking in these classes, for they were small, ranging in size from two to four persons. We discussed what they wanted to talk about. News stories usually triggered into the open some personal topic, for the boys were centered around themselves rather than the outside world. If this seems immature in view of their age, consider their years of lack of contact with the ideas of other people, ideas to be obtained mostly through reading which they have not done. These students have missed a great deal during their years in school; they are minus whole chunks of life because they lost out on the access to it back at the beginning, when they made their first contact with the school and their problems in learning were not identified.

So the high school student with a learning difficulty characteristically begins a discussion with a gripe—about the school, the principal, the Dean, the library, some "other" teacher, his father, his mother, a brother, a sister. Rarely, however, does he gripe about his job or his girl. At first I wondered what the reason was for this sharp division between what he liked and what he didn't like in his personal relations with people. As I listened to his increasingly articulate discussions, I realized that the difference for him lay in whether he could choose what he must like and work with, or whether it was thrust in front of him and someone said, "Baby, you take."

So he gripes about the people he is stuck with at home and at school. He feels that tradition and structure lock him into places he can't get out of. He says one thing that would help would be more freedom of choice. When he can't have this, he feels the home and the school are not on his side, so he fights everything that comes from them. In areas such as girls or jobs, he can choose, so he is satisfied. Considering his position, I see that his independence of spirit can be tapped to advantage, so I resolve that at least in his reading class he will not a chance t

It was amazing to see how helpful an inexpensive item like the newspaper was for those tied-up, poor readers. Title III paid for their papers during the year of experimentation. Next year's innovations at the Diagnostic and Remedial Learning Center will go in another direction. So the school administration stands at the end of the school year at the point where it needs to decide whether the newspaper is a worthwhile way of reaching and teaching students such as those I worked with. Should the school spend money for newspapers? It hasn't done anything like this before. Or should it spend money repairing washrooms that have been wrecked by cherry bombs? It has done this before. The answer lies, of course, in discovering the students' reasons for coming to us. What are we supposed to be doing for them? Through an informal inventory I gave the students the first day they entered my class, I obtained an insight into their language background as well as into their reading interests. Most of them were as non-verbal and as hostile toward each other as they were to me. My first night after my first day with them was a busy one, but it resulted in a second day which found each student in a setting of newspapers, magazines, and paperback books strongly reflecting his personal interests. The girl who had stormed in on Day No. 1 saying nobody could make her touch anything to read walked out on Day No. 2 with a copy of *Ingenue* under her arm because she just had to try the hairdo's on page 54...

A similar accepting experience occurred with the boy who would not even come in and sit down the first day. "I ain't readin', period," he said, and then he just stood in the door, looking at the clock out in the hall for the entire 45 minutes. Head stock boy in a large supermarket with its thousands of items, I knew he was bright even though he swore he'd never need to know more than how to read cans.

So on his second day with me he got an envelope filled with the cut-up pages of his company's weekly newspaper ads. I asked him to reconstruct the layouts. To prove how well he knew his stock, he did the whole job in record time, right down to the last

level, to find materials useful in solving his own problems. Piekarz,[3] for example, has shown that children unable to read a passage with relative ease have fewer reactions to it, with many more responses at the literal-meaning level than at the implied-meaning or evaluation levels. Accordingly, the effort we give to the making of skilful, fluent readers is worthwhile in both the elementary and the secondary school. Youth need word-attack skills and ability to follow directions, not because they are going to read only words or follow directions blindly, but so they can go into the meanings behind the words and, if necessary, to questions about the validity of the directions. Grasp of literal meaning ordinarily comes first. No student can interpret sensory appeal or symbolism if he cannot understand the literal meaning of the passage. This is one argument for occasional use of the "read-to" situation, whether in third grade or tenth grade, but it is also an argument for a sound body of literal comprehension skills as a basis for interpretation and for impact.

But teachers of elementary and of secondary classes can help young people derive both literal meanings and implied meanings. I believe the problem is not "either-or" and that teachers of fourth grade and teachers of secondary English must operate in both orbits. However, it is in the realm of imaginative literature that we usually get to the fourth and fifth levels of reading. It is here that good writing is intrepid in its approach to problems, ingenious in its solution of difficulties, in a way that the child or adolescent cannot achieve by himself. Getting the words right is not enough. It is at these fourth and fifth levels that reading can make its greatest contribution to individual development.

Fortunately, we have some research evidence beginning to be accumulated about reading at the fourth level of interpretation of printed materials. The effects, of course, will depend upon how the reader interprets.

c.   When asked to respond to short stories, adolescents give interpretational reactions as a dominant type of response; other categories of response, in order, are narrational, associational, self-involvement, literary judgments.

d.   Responses to a piece of literature are largely an individual matter. Children and adolescents with different experiences, personalities, and needs see different things in the same character, story, or poem—and one interpretation may be just as "true" or "honest" as the other. Consequently, teachers of reading and literature should beware of looking for the one "correct" interpretation,

e.   With adolescents, literary judgments and emotional involvments vary inversely. In other words, children and adolescents tend to suspend objectivity when emotionally involved. Conversely, if we emphasize objective judgment, we may cut down emotional response.

f.   The most common emotional involvements of adolescents in fiction seem to be "happiness binding" (the desire for a happy ending) and insistence upon certainty in interpretation,

Perhaps these half-dozen samples of findings are enough to show that we are beginning to accumulate some research evidence about some of the psychological factors involved in interpretation, whether it is a good story in a third reader, a chapter or poem in a high school anthology, or an individual example of an author's work.

The Impact of Reading

Unfortunately, evidence about reading having an impact on lives is largely confined to anecdote and to case studies. Some of you remember a book, story or poem that greatly affected you. MacLeish has said that "A poem must not mean, but be." Proust has written, "Every reader reads himself. The writer's work is merely a kind of optical instrument that makes it possible for the

upon the characteristics of the individual doing the reading, the content of the materials read, and the total situation in which the reading is done. Studies by Smith, Weingarten, and others have shown possible influences on values and behavior. The process of bibliotherapy as used with individuals with personality difficulties may have some lessons for us here in work with more normal adolescents. Rather than trying to quote you the ten or fifteen researches that give some evidence of the effects of reading, I should like to proceed with a few examples of what can be done in ordinary classroom situations.

Some Practical Suggestions

A few lucky young people make private discoveries of the world of literature, but most children need to be helped in their explorations by the understanding parent and teacher. For generations parents and teachers have made an honest effort to go beyond the surface facts or literal ideas of a selection to some of the important, underlying ideas because they would have children or youth greatly influenced by literature. Teachers especially can be aware of the many different potentialities of the reading process corresponding, in part, to the five levels described above. Reading *may* bring at least eight kinds of results:

Skill and Understanding
{
Acquisition of new skills
Increase of worthwhile information
Knowledge of how to find out more
}

Interpretation
{
Development of interests and appreciation
Improvement of problem-solving and critical thinking
}

Impact
{
Evolution of social and personal insights
Understanding of fundamental values
}

deliberately taken from popular basal readers and anthologies. You don't have to go to a highly selected individual piece of literature to get literary or human values. In fact, above second readers at least, most selections are put in reading materials for class use just because they have some underlying ideas and may illustrate important values

Take for example the little poem, "Bird Talk" found in a basal third reader. Now you could teach this poem at the level, here are birds chattering together and this is what they say. Or by question and discussion you can lead the group to see that our perceptions depend upon our point of view. Birds see things in bird-ways and each of us see things in our own individual way. You might stop with this important bit of psychology. Finally, some children might be led to the climactic idea expressed elsewhere by Robert Burns

O wad some power the giftie gie us
To see ourmels as others see us!

Because this is a third-grade poem, of course the children should do something about it besides discussing it. Perhaps they will write other poems, as one class did, from the point of view of other animals. "Think—said the rabbit,"! or "Think, said the horse," etc. Or perhaps they might write, as another group did, "How I see myself and how some other person (mother, friend) sees me." These last were personal documents to be read only by the teacher.

Or at the secondary school level take the Edwin Arlington Robinson poem "Richard Cory" found in some anthologies. The poem starts:

Whenever Richard Cory went downtown,
We people on the pavement looked at him;
He was a gentleman from sole to crown,
Clean favored and imperially slim.

One way to use this poem is to postpone discussion. Instead, let

another, "contrast between rich and poor"; and still another, "All that looks perfect may not be so; deceptiveness of appearances." Here were young people reaching for the truth, each in his own way, and who is to say which answer is "correct." Perhaps, all of them deserve further discussion, writing, and searches for related literary materials.

This poem may be a bit of a shocker to the junior high school student who is "happiness bound," who has been accustomed to stories with the Hollywood ending of "all's well." Perhaps this is enough—all does not end well in this world. How would you do it? Perhaps the group can be encouraged to dig a little deeper, can be helped to understand the behavior, first of the townspeople, and then of Richard Cory himself. Here is a piece of literature whose ambiguity can stimulate discussion and writing. Thus the group moves away from the black-and-white of the Westerns and much cheap fiction to a study of some of the mixed motives and human conflicts found in all of us. Then they are on the way to some of the self insight and social insights which literature can give.

We have evidence that teen-agers want to grapple with some of these problems. For example, one English teacher in a California high school collected the opinions of an "average" ninth grade about the books labelled "teen-age books" in their school library. Here are some of the comments (these are all quotations):

1. I'd like more realism, not so much fairy stuff, with phony living happily ever after.
2. Books which present the ordinary teenager and his problems, so we can see how some are solved.
3. Teen-agers cuss and know cuss words, but the books I read sound as if they were written for ten-year-olds.
4. I'd like a book which would show how hard it is for a high school girl to get to know the boy she likes. Parents always tell you that you should go with someone else.

7. Authors must think that teen-agers are awfully innocent.

8. Life isn't like what you find in books. Life is hard and people are cruel and don't think of others. It's dog eat dog, and an eye for an eye, and a tooth for a tooth. (From a boy in an underprivileged family.)

Here, then, are interpretations by young adolescents not of one poem or story, but of the books labelled as written for teen-agers and usually found in high school libraries. You have noted that a few students found these books satisfying and realistic, that others regarded them as pap and fantasy. In the reactions there are, perhaps, some implications for the content of what we ask young adolescents to read. Their books should deal somehow with situations which seem important to them; the books' problems should be their problems.

I have used poems for my practical examples because they are short. You have other poems, and other stories and plays which mean a lot to you at the fourth and fifth levels of reading and which, accordingly, can be shared with young people. These may be a simple story in a primer about a family, a tale of heroism, or a well-known piece of literature. Whatever it is, teach it in depth. Give it time for thought.

To summarize what I am saying, perhaps I have been suggesting that secondary teachers can learn from elementary teachers, and elementary teachers can learn from secondary people. In the past, the elementary school has been strong on teaching reading skills; in secondary schools, some of our best teaching has been in literature. Accordingly, secondary teachers can learn from elementary people ways of teaching reading skills—not just word recognition or comprehension, but how to read a newspaper, how to handle a science chapter, how to study a

applied at the other level.

For three hundred years now, since the days of the *New England Primer,* some people have believed that reading can contribute to the virtuous life. Probably they are right, but we all have to work on it.

FOOTNOTES

[1] E. Elona Sochor, editor, *Critical Reading: An Introduction.* Bulletin of the National Conference on Research in English. National Countil of Teachers of English, 1959.

[2] Charles M. Clark

PART V

MEASUREMENT OF READING PERFORMANCE

WHAT CAN BE MEASURED?
Roger T. Lennon

We can look back today upon virtually a half-century of experience in the development of objective, standardized tests of a wide variety of reading skills and abilities. Such tests, numbering well into the hundreds, have been making their appearance year after year since about 1910; some have enjoyed decades of apparently satisfactory use, others have lapsed into disuse after relatively brief careers. The period since 1910 has witnessed prodigious research activity in the reading field; for the past several decades, an average of a hundred or more publications per year have swelled the literature devoted to this endlessly fascinating topic. Much of this research literature has been concerned with analysis of reading skills, speculation and experimentation concerning the nature and organization of reading abilities, and development and utilization of appropriate instruments. To undertake even the most cursory review of the reading tests that have appeared, or of the implications of the voluminous research with respect to reading measures, is far too ambitious a task, and yet an answer to the proposed question requires at least passing cognizance of some of the history and research.

THE PROBLEM

What can be measured? An unsuspecting student who sought to answer this question from an examination of test catalogs, or of the instruments which they describe, might say, "We can measure paragraph comprehension, word meaning, word discrimination, word recognition, word analysis skills, ability to draw inferences

a writer, ability to grasp the general idea, ability to deduce the meaning of words from context, ability to read with understanding in the natural sciences, in the social sciences, in the humanities, ability to perceive relationships in written material, ability to sense an author's mood, or intent, ability to appreciate poetry, ability to grasp the organization of ideas, ability to read maps, charts, and tables"—The list may be extended, if not *ad infinitum*, at least *ad* some seventy or eighty alleged reading skills and abilities. And this, mind you, from an inspection only of tests that are labeled as reading tests, without any consideration of other tests which look very much indeed like blood brothers to the reading tests, but which mask their familial ties under such beguiling aliases as tests of "critical thinking," of "educational developments," or even—most artful deceivers of all—as tests of "mental ability," "intelligence," or "scholastic aptitude."

Surely, no reader is so naïve as to suppose that there really corresponds a separate, identifiable skill or ability to each of the test names. What then may we assume we are actually measuring with the scores and scores of differently named tests?

It is one thing—and a necessary thing—to make a careful analysis of reading ability, to spell out its various supposed components in detail, and to prepare extensive lists or charts of the specific skills or abilities to serve as statements of desired goals or outcomes of the reading program. It is quite another thing to demonstrate that these manifold skills or abilities do, in fact, exist as differentiable characteristics of students; and still a third thing to build tests which are in truth measures of one or another of these skills, and not of some more general, pervasive reading ability.

But if the number of abilities or dimensions of reading is not the seventy or eighty indicated, what is it? And how can we tell?

Dr. Traxler made his plea, such empirical attacks on the problem were under way, and during the decade or so following, there appeared a series of excellent studies of this kind that shed much light on our topic.

REVIEW OF RESEARCH

Traxler himself in 1941[2] reported an analysis of the Van Wagenen–Dvorak Diagnostic Examination of Silent Reading Abilities, one of the most impressive tests of this kind that had appeared up to that time. He sought to ascertain whether the several parts of the test yielded "measures which are independent enough to warrant their separate measurement and use as a basis for diagnostic and remedial work." Studying the results on these tests for a group of 116 tenth-grade students, Traxler concluded that the "measures of Central Thought, Clearly Stated Details, Interpretation, Intergration of Dispersed Ideas, and Ability to Draw Inferences appear to be measuring closely related reading abilities. There is at least reasonable doubt concerning whether or not the separate scores contribute anything greatly different from the reading level score." He found most of the parts so highly correlated that diagnosis based on the scores had little real meaning. In fact, when the intercorrelations were corrected for attenuation, most approached unity.

Even before Traxler's call for research, Gans in a 1940 study[3] had analyzed the relation between a specially built measure of the "critical types of reading required in the selection-rejection of content for use in solving a problem," and a reading composite based upon two standardized reading tests, Thorndike-McCall and Gates Silent Reading, and four sections of the California Test of Mental Maturity. (Worthy of note is the fact that Gans justified the composite as a general measure of reading comprehension on

to conclude that "the abilities (i.e., the reference-reading abilities) are not closely enough related to those in the reading criterion to be measured by tests designed for discovering the criterion abilities," and "the composite which functions in reference reading is made up of a number of variables. with reading ability, as measured by the reading criterion one factor, and the selection-rejection pattern another." ". . . another factor operates which possibly includes some function of delayed recall."

A trail-blazing study, and probably still the best known of all the investigations of this type, was that reported by Davis, originally in 1941.[4] Davis sought to identify some of the fundamental factors in reading comprehension and to provide a means of measuring them. On the basis of a comprehensive survey of the literature, he listed nine supposed categories of basic skills of reading comprehension. He proceeded to develop tests questions to measure each of these skills, administered the tests to a group of subjects, and computed the intercorrelations among the nine tests. He interpreted a factor analysis of the results as indicating the presence of nine factors, six of them clearly significant. These latter included word knowledge; ability to manipulate ideas and concepts in relation to one another—"reasoning in reading"; ability to grasp the author's expressed ideas; ability to identify the writer's intent or purpose; ability to follow the organization of a passage; and knowledge of literary devices and techniques. Of Davis' nine factors, word knowledge accounted for by far the greatest part of the variance, followed by the so-called "reasoning in reading" and the literal meaning factors.

Davis concluded that at least two factors, the word knowledge and the reasoning factor, were measured in his tests with sufficient reliability for practical use, and that adequately

reflects different purposes served by the respective types of factor analysis employed in the two investigations. Davis, reacting to Thurstone's re-analysis of his data, continued to maintain that his first six factors, at least, represented significant dimensions of reading comprehension, though admittedly, several of them accounted for very little variance in reading scores.[6]

Langsam in 1941[7] reported a factor analysis of results of six reading tests, yielding fourteen scores, and one intelligence test yielding seven scores. She identified five factors, labeled respectively a *verbal* factor, concerned with word meaning, a *perceptual* factor, a *word* factor denoting fluency in dealing with words, a *seeing relationships* factor, perhaps concerned with logical organization, and a *numerical* factor. The factors were found to overlap to a considerable degree, beclouding their interpretation.

Conant in 1942[8] undertook to answer the questions: "Is there a general reading comprehension, or does reading proficiency depend upon skills using a number of different reading techniques? If there are different reading abilities, how are they interrelated? She developed an outline of a test to measure the following skills: (1) Reading to get in detail the pattern of the author's thought, including comprehension of the main points, comprehension of specific facts which support main points, comprehension of cause-and-effect relations, and comprehension of words in context. (2) Ability to interpret and make a critical evaluation of material read, including selection and organization of facts relevant to a more general idea, and ability to draw inferences.

Conant developed tests designed to measure these skills and administered them, together with the Nelson-Denny Reading Test and American Council Psychological Examination.

pointed out that her results by no means precluded the possibility that some individuals may show, marked differences in their relative abilities to use different reading techniques.

A doctoral dissertation by Artley in 1942[9] explored the relationship between general comprehension ability, as measured by the Cooperative C-1 Level of Comprehension test, and hypothesized special reading abilities in the social studies area, measured by the Cooperative Tests of Social Studies Ability, Proficiency in the Field of Social Studies, and Survey Tests in the Social Studies, including ability to obtain facts, to organize, to interpret, to generalize, to perceive logical relations and to evaluate arguments. For a group of two hundred eleventh-grade students, Artley found the correlation between general comprehension measure and the composite of the specific measures to be .79 (.86 corrected for attenuation). He found also that the correlations of the several specific measures with total reading comprehension all fell within a fairly narrow range, from .6 to .8, and he concluded that one could not "dismiss the possibility that there are a great number of pupils who might profit from a specific type of instruction." Artley interpreted his findings as "evidence" that there exists a significant degree of specificity in the measures relating to reading comprehension of the social studies."

Hall and Robinson reported in 1945[10] an attempt to develop independent measures of various aspects of reading. After analyzing the research and the available tests produced up until the time of their study, and concluding that these tests left very much to be desired from the standpoint of diagnostic potentiality, they developed a battery that included twenty-five measures, many of which were tests of reading of non-prose material. Factor analysis of the results of administration of this battery of tests to

most elementary school reading programs. Unfortunately, adult literacy programs that capitalize on this interest by using special materials are penalized when their students' progress is measured by children's tests, since the tests measure the learning of children's words and concepts.

Perhaps this helps to explain why some programs that are enthusiastically received by adult illiterates, are based on their interests, and are paced to their needs, often produce no more significant reading gains than those programs which simply make use of children's basal readers. Most of the standardized tests in use at the present time are built on the vocabulary and concepts contained in basal readers and, naturally, do not attempt to measure much of the vocabulary and concepts of adult-oriented programs.

A third difficulty with the tests presently being used to measure achievement for adult illiterates is that populations of children are used for standardization. Largely because it is unclear what constitutes a grade equivalent level for adult basic education, test-makers rely on grade school populations to establish norms for most tests. Even for some "adult" beginning-reading tests, a perusal of the manuals shows standardization has been carried out using children populations rather than adult populations.

A fourth difficulty in using children's tests with adults is the format of the tests. Some of the elementary reading tests are quite childish in their appearance. This is not the greatest disadvantage of such tests, but the format of adult tests presently in use or under development is certainly preferable. The self-respect and feeling of personal worth of the adult illiterate must be safe-

to how to take a test. They suffer particularly from confusing answer sheets. One of the more promising adult basic tests recently on the market makes use of an answer sheet that has been found to be quite difficult for many of the students in adult literacy programs.

The adult illiterate often has more difficulty than the first-grade child in handling a pencil and paper. Although an adult may not squirm as much as a first-grade child, prolonged testing sessions are highly uncomfortable for him, and he has difficulty maintaining interest and attention over a long period of time. He often suffers from visual problems that are undiscovered until he is required to do close work. In addition, he has more difficulty following directions than his maturity would indicate.

It is altogether too easy to assume that adults can handle the task of test-taking without any problems. The wise examiner will realize that they have had little or no instruction and that they may wonder whether they are to proceed down or across the page, whether they are to turn the page and continue the test or should stop, what they should do when they come to an item and do not know the answer, and so on. Part of the burden of getting good test results lies in teaching adult illiterates explicitly what one must to in order to take the tests.

Assessing Reading Gain

The evaluation of programs and materials is often made largely in terms of reading gain as measured by pre-testing and post-testing. Good testing practices are therefore a prerequisite to the accurate evaluation of programs and materials. The following

permitting the teacher to choose the proper level of test.

Test scores must be carefully interpreted. Tests don't measure certain kinds of reading progress; they also do measure gains that are not true reading gains. Many adult illiterates must go through the process of developing readiness to profit from reading instruction before they will make satisfactory gains in their ability to read. Readiness tests are rarely given to adults, however. Students who need readiness training will usually score at a low first-grade level when they are tested by a standardized reading measure. A test given after the end of the period of instruction may show that there has been little or no gain. When in reality there may have been considerable progress in developing *readiness* to profit from instruction. The lack of gain on the standardized tests is discouraging to the student, discouraging to the teacher, and discouraging to the administrators of the program—even though the student is actually profiting from instruction, and no one ought to be discouraged.

In the course of the Buffalo study of reading interests previously mentioned, a number of students recorded little or no progress during the first year of instruction but quite satisfactory gains during the second year. In the opinion of the research staff, these scores indicated that, during the first year of instruction, the students had been acquiring the underlying abilities or readiness that they needed to be able to profit from reading instruction. Pre-test and post-test scores during the first year of instruction, however, showed little or no gain.

Tests not only fail to measure some forms of reading progress; they measure some forms of progress that are actually not

adjusted to the school situation.

Illusory reading gains also may result from the use of different tests for pre-measurement and post-measurement. One school visited by the writer tested all incoming adult illiterates with the *Gray Oral Reading Test* within a few minutes of the time that they arrived in the school building. The student was taking a strange test from a person in authority whom he did not know, in strange surroundings, creating a most stressful situation. The results of the test were later compared to the results of another test, a standardized reading test designed for third graders, administered at the end of the school year. The two tests tested different abilities: the *Gray Oral Reading Test* measured oral fluency and word recall, while the standardized reading test measured ability to recognize word meanings and understand paragraphs while reading silently. The tests were given under totally different circumstances and were standardized on different populations. Yet the results were reported as though the differences between the two represented true gains in reading ability. This was obviously a faulty practice.

Occasionally the inadequacy of existing tests will lead an evaluator to attempt to assess a program's effectiveness simply by tabulating the levels of material through which the students have progressed. He may cite the fact that the students began at "Level One" and proceeded through "Level Eight" as evidence that they have gained eight grade levels in reading ability during the course of the program. Although such statements of progress are heartening to the administrators and funders of the programs, they are highly inaccurate.

seventh-, or eighth-grade level material without the confirming evidence produced by any sound evaluative instrument—either (1) a standardized test properly administered or (2) the instructional level on an informal reading inventory (discussed below). Simply moving through "levels" does not constitute gain any more than being measured once while stooping and a second time while standing on a chair changes a man's height.

Although not commonly used, informal reading inventories offer one of the better means of assessing reading gains. The informal reading inventory is a sequence of reading materials of increasing complexity; the examiner uses it to determine the highest level at which his students may read instructionally or independently. The advantage of this technique is that the inventories may be based on the reading material that the student is actually using. The disadvantage of the technique is that we have no well-established levels of performance for adults comparable to the grade levels for the elementary school. This makes it difficult to get a sequence of materials of increasingly difficult levels.

New tests are badly needed that are built on adult-oriented interests, standardized on adult populations, and complete with different forms and different levels. Progress has recently been made; it is hoped that these early efforts will continue and the products will be improved.

Assessing Potential

Potential is assessed by measuring manifestations of a person's ability to learn from his environment. Basic to this is the

the sun rises in the east and sets in the west and that if he faces west, north is to his right and south is to his left, he would not be expected to know the directions. If we then try to test his potential for learning by saying, "If you walk north one block, then turn left and walk another block, what direction would then be to your left?" we are not able to assess his intellect or potential. We cannot say he has no potential because he did not have an opportunity to learn the elements on which we based the test of potential. (If he had had such an opportunity and had not learned, then we might be able to say something about his learning ability.)

To repeat, most tests of potential for adults presume that the individual has acquired certain common skills and information. The subtest of coding in the *Wechsler Adult Intelligence Scale* presumes that each person taking the subtest has had an opportunity to learn how to use a pencil and paper and to follow verbal directions. If, in fact, a person has not had that opportunity, the test can give no indication of his intelligence. Equally suspect as intelligence measures are tests of common knowledge such as the following items from the WAIS information subtest: "Where does rubber come from?" "Name four men who have been President of the United States since 1900." "Long-fellow was a famous man. What was he?" The WAIS vocabulary subtest asks the individual to define a number of words such as "fabric," "conceal," and "enormous." Such questions and tasks measure academic learnings that adult illiterates, whatever their intelligence, have rarely had an opportunity to acquire.

The basic means by which adults

fact that not even the WAIS, considered to be a paragon of such measures, was able to satisfactorily discriminate between adult city-core illiterates who made gains in learning to read (demonstrating their potential to learn) and those who did not make gains (indicating lesser potential in terms of learning ability).

Scores on tests of adult learning potential are sometimes advanced as "proof" that the poor education of adult illiterates or various minority groups is attributable to intellectual inferiority. Since tests of adult potential are commonly based on academic learning which many adult illiterates could never have acquired, such a conclusion is unwarranted.

The poor quality of existing aptitude tests does not mean that the potential of the adult illiterate is absolutely unfathomable. During the Buffalo study, certain factors were identified as indicative of ability to profit from reading instruction. They included.

1. Expressed preferences for certain book titles
2. Ability to grasp analogies illustrated with common items
3. Ability to see missing parts in common, simple pictures
4. General reading ability of the subject's family
5. Ability to arrange pictures in logical sequence
6. Ability to trace a path through a maze
7. Understanding certain functional information such as handedness and directions.

An item analysis of the numerous variables presented to the

REFERENCES

Evans, Robert. "Teacher Evaluations of Reading Skills and Individualized Reading," *Elementary English* 42 (March. 1964): 258-60.

McDonald, Arthur S. "Factors Affecting Reading Test Performance," *Research and Evaluation in College Reading.* Ninth Yearbook of the National Reading Conference for College and Adults, pp. 28-35. Fort Worth, Texas: Texas Christian Univ. Press, 1960.

Michaelis, John U., and Tyler, Fred T. "A Comparison of Reading Ability and Readability," *Journal of Educational Psychology* 42 (December, 1951): 491-98.

Mills, Robert E., and Richardson, Jean R. "What Do Publishers Mean by 'Grade Level'?" *Reading Teacher* 16 (March, 1963): 359-62.

Russell, David H., and Fea, Henry R. "Validity of Six Readability Formulas as Measures of Juvenile Fiction," *Elementary School Journal* 52 (November, 1951): 136-44.

Simpson, Ray H., and Camp, Kenneth L. "Diagnosing Community Reading," *School Review* 61 (February, 1953): 98-100.

Spache, George. "A Comparison of Certain Reading Tests," *Journal of Educational Research* 43 (February, 1950): 441-52.

Woodbury, Charles A. "The Identification of Underachieving Readers," *Reading Teacher* 16 (January, 1963): 218-23.

CAN WE USE EXISTING TESTS FOR ADULT BASIC EDUCATION?

Robert G. Whittemore
Ben P. Echeverria
John V. Griffin

If you wished to test a second or third grade child for aptitude, intelligence, or another dimension, you could probably find a great number of standardized tests that have worked previously. The problem is solved with relative ease, as norms have been established and tests have been developed specifically for children.

But with the advent of classes in *adult* basic education, we tried to test grown persons of this achievement level (0-8 grade level)—those who possibly are socially mature but who may have hundreds of unseen reasons for non-learning, or who resent being tested like some laboratory specimens. No norms for such persons had been established, and we really did not know the answers to *any* of the following educational questions:

What do we want to know about these adults? Why?

What tests validly measure what we want to know about these adults?

How can we evaluate our classes in adult basic education through a program of testing?

Can existing tests be used to group adults in classes of basic education? What is the most effective way of grouping? Is

The Problem

Many existing employment opportunities, even those which can be clearly delineated by use of existing measurement devices, require (as a minimum) a reading level, a general numerical ability level and an over-all performance level approximating that reached by sixth grade students. One of the major problems in some segments of the MDT program has been that a number of MDT applicants did not attain the level of intellectual functioning found among the "general working population."[1] Significant problems existed when training for an employable skill was precluded by inadequate levels of general functioning.

In December 1963, an amendment to the basic MDT act was enacted which "would provide basic educational training to enable the unemployed to attain a level of preparation which will qualify them for regular occupational training opportunities."[2]

This project sought to develop additional applications of existing knowledge about MDT applicants who could not benefit from MDT training programs unless they had instruction in Basic Education experiences. The project tried to answer the questions:

At what level of ability are these people?

What personality dynamics are in existence?

What methods of measurement are most efficient in measuring the improvement in their societal functioning as a result of Basic Education training?

Specific subsections of this report are?

Determining the best testing devices that can be used to discover various areas of homogeneity in trainees enrolled in

Selection

As is indicated by the report of the Secretary of Labor, the United States Employment Service attempted to screen all applicants for MDT training. Simply stated, the U.S.E.S. personnel used an excellent instrument (the GATB) in a fine job of counseling. "The local employment service office selected unemployed or part-time workers and referred them to the training facility where they were enrolled by school authorities. The regular counseling and testing procedures of the local offices tended to screen out some of the poorly motivated and the socially and educationally deprived because of their low levels of reading and mathematical achievement."[3]

This selection and referral process prevailed in both the Las Vegas and Reno areas. Major information available from the local employment service office was promptly sent to the schools and used in making the first selections. The local employment service offices, realizing that their counseling and testing procedures were not wholly applicable to these trainees, were most cooperative with the local districts. The MDTA classes which were used in this study were taken from the MDTA programs operating in Las Vegas and Reno, Nevada.

Trainee Background

A general description of the groups used in this study should help future investigators understand the nature of this research project. The groups were delineated according to age, educational level, and GATB "G" score.

The Las Vegas trainees (N = 87) were primarily Negro and female with only five trainees being Caucasian and two trainees being male. The Las Vegas trainees had a slightly wider range of ages with more than one-half of the trainees (Median) being 28 years or older. The median claimed educational level of the Las Vegas trainees was ten years and ranged from five years to twelve years. The "G" score of the GATB was used by Employment Security as a general indication of intelligence. The Las Vegas trainees had a "G" score range of 41 to 112 with a mean of 88.8.

The three groups of the Reno MDTA trainees (N = 39) were more heterogeneous than the two groups of Las Vegas trainees. The Reno trainees consisted of four Negroes, thirty-five Caucasians, with thirty being female and nine male. The median claimed educational level of the Reno trainees was 10.2 and ranged from four to thirteen years. The Reno trainees had GATB "G" scores ranging from 73 to 148 with a mean "G" score of 101 for all trainees (N = 39). It should be stated clearly that Reno MDT Class 5018 was incorporated into this study as a contrast group. The IQ scores and educational level of this group are significantly different than scores and educational level of other groups.

Comparison of Groups

Group comparisons were made by statistically comparing the mean ages, educational level, and GATB "G" score of the Las Vegas and Reno groups. The results of these comparisons along with the report of tests of significance of the differences between

TABLE II

A. Analysis of Differences in Mean Scores,

GATB "G"

	5006	208	5018	219	222-1
5006		Sig Diff .01 level	Sig Diff .01 level	No Sig Diff	No Sig Diff
208			Sig Diff .01 level	Sig Diff .01 level	Sig Diff .01 level
5018				Sig Diff .01 level	Sig Diff .01 level
219					No Sig Diff

B. Analysis of Differences of Mean Educational Level.
MDTA Class 5018 was significantly different from all others, and there was no other group significantly different with regard to educational level.

C. Analysis of Difference of Mean Ages.
MDTA Class 5018 was significantly different from all others, and there was no other group significantly different with regard to ages.

The group dynamics generally prevalent among adult educa-
tion classes were apparent in the MDTA classes of this study.
Much descriptive material was available in already printed reports
which describe these general dynamics; examples of the reports are
the Delaware Multi-Occupational Project,[4] Education and Train-
ing,[5] Educationally Deficient Adults,[6] Manpower-Research and
Training,[7] Training the Hard-Core Unemployed.[8] The single

suitable for evaluation of intelligence, achievement, aptitude, interests, reading and personality, did not prove successful.

Various instruments given at different times during the eighteen months to five different groups include:

Intelligence: Henmon-Nelson Test of Mental Ability
Grades 9-12, Form A
California Short Form Test of Mental Maturity
Level 3, Grades 7-8, 1963
Otis Quick Scoring Mental Ability—Beta Test
Revised Beta Examination

Achievement: Sequential Test of Educational Progress, Level 3
Grades 7-8-9

Aptitude: Differential Aptitude Test, Form L, Grade 9

Interest: Kuder Preference Record—Vocational Form CH

Personality: Minnesota Multiphasic Personality Inventory
California Psychological Inventory

Reading: Iowa Silent Reading Test

The Henmon-Nelson Test was designed to measure those aspects of mental ability which were important for success in academic work and in similar endeavors outside the classroom. This test was easily administered, relatively non-threatening and easily scored.

The California Short Form Test of Mental Maturity, Level 3, has been described as an instrument for appraising mental development or mental capacity. The test included a good number of nonverbal items and was easily administered and scored.

The Otis Quick Scoring Mental Ability Beta Test is a widely used verbal intelli

a cliche devoid of meaning. It is, however, becoming increasingly important as we extend in range and depth our information on human behavior, and should periodically be examined in the light of new information.

Human beings are goal-oriented. A biologist has suggested that deeply embedded in their primitive life is an orientation towards survival which over many thousands of years perhaps conditioned the survival of those individuals whose gene structures were altered in the direction of cooperation as a survival mechanism. Whatever this past history and present genetic inheritance, goal orientation towards survival still remains, but is embedded now in a matrix of culturally derived behaviors designed to assure survival modern style.

Thus the adult leader looking at these goal-oriented human beings through the American cultural fabric may see a person needing to get along better on his job, or a mother trying to establish better relationships with her children, or an older adult wanting to while away his time profitably, or a young man looking for academic skills which will help him up the vocational road. Getting at these purposes and needs is difficult even when they are as direct as in the preceding examples.

For the adult leader, the difficulty of spying out the motivations of his group members is compounded by the fact that he and they use language as a chief tool of communication. We human beings are symbolizing animals and probably never more so than when we use words to convey our thoughts and feelings.

"Say what you mean" is an injunction which cannot be taken seriously in an adult's response unless the person listening can interpret the language. Thus the presumably flat statement, "I want to take a course in speech," may be neither flat nor uncomplicated declaration of intent. It may say, "I am not getting

Thus culturally overlaid drives and emotionally charged symbolizing may complicate the task of the adult leader in getting at the motivations of individuals in his group. And he has not even those meager tools such as case records, tests, and psychological counsel with which teachers of children are ordinarily furnished. He can only feel his way guided by his own expanding store of behavioral information and by a sympathetic ear even to the most seemingly extraneous comments by individuals in his group.

The Preferred Method

2. *Problem-solving* ought to be the preferred method of the adult leader. This principle is derived from the roles of adults rather than from an evaluation of their capabilities. Method should be derived from a knowledge of learning potentials and abilities, and what we know of adults in this respect is disheartening.

We human beings are biological organisms subject to physiological growth and decline. Because we have never been sure what mind is independent of body and because aging psychologists may have a reluctance to examine themselves, we have tried to put as good a face as possible on our intellectual vigor. However, the simple truth of the matter is that most studies show a decline in "mental" abilities commensurate with that in our physiological abilities, and a few investigators insist that the curve of learning declines more sharply than that for motor skills.

The curve of learning shows a high at ages roughly 22 to 25, with a continuing plateau or minor decline to 30, a sharper decline to 50, and a toboggan slide thereafter. When results of tests either of learning or intellectual ability are analyzed into their several parts, these parts show differential decline. Those which measure skills closely related to old learnings and to accumulated experience show least decline and may as in the case of

endeavor is behind them when they have passed the ages of 25 to 30.

Problem-solving is an intellectual ability, and a very important one. Certain aspects of problem-solving play a key role in intelligence tests: as a matter of fact, intelligence is defined as the ability to solve problems quickly and accurately. To be sure, there have been statements to the effect that problem-solving ability increases with age; but studies done in this area have tested the progressive improvement of ability with children and youth ages three or four to 20 to 21. So far there is at least a hint that problem-solving ability declines at the same rate as do other intellectual abilities. This does not deny that in some situations an older adult may not make wiser decisions than a younger, purely because he has a body of experience which stands him in good stead. This is rather different from saying that he has retained or improved his ability to tackle abstract problems quickly and accurately.

Why then stress problem-solving as the method for use with adult groups? First, of course, because adults do not wholly lose their abilities in this direction. They can indeed solve problems and reconstruct experience even if they cannot do so as rapidly or as effectively as they could at younger ages. But more important, problem-solving has a base in the logic of adult life.

Whether for good or ill, adults must continuously solve problems—the most important in their society. Whether they act permissively or authoritatively toward youth, they are still calling the tune for the society in which youth shall live. They must participate in running their own affairs on a local, national, or international basis, or they must make the choice of submitting to authority for such purposes. They were involved day by day and hour by hour in a set of situations which call for judgment. Often

ient, but much exercised about how we can get those crooks ou
f the courthouse. Thus, in the words of two modern philo-
ophers, each human individual carries on a continuous transaction
ith his social or physical environment, in the process of which
oth individual and environment are changed; and the natural
iethod of interacting with that environment is through some
icipient kind of problem-solving. It seems more than pertinent,
ien, to suggest that adult leaders use that method which is
ormal for most life processes, and that they help the members of
ieir groups to perfect skills in this process.

'he End Product: Action

3. The *end product* of the problem-solving activity ought to be
ction. The last step in the problem-solving process, before
nother problem shall be embarked upon, is acting on the
referred solution. Only by action can the individual secure a
eeling of closure. Whether he has made a wise choice or not he is
i no position to profit from his choice unless he acts upon it.
Although this may sound superfluous and as though it should have
ieen assumed when problem-solving was accepted as a
methodology, nevertheless, the principle of action is often
ionored in the breach by adult education groups and agencies.

Many organizations have in their written or agreed-upon
tatement of purposes that they are not action groups. Members of
h e groups feel secure in the belief that they will not be involved
n political controversy or subject to censure for having outraged
he mores of important members or taxpayers. Part of their
lifficulty arises from a misassessment of the ebb and flow of
nevitable life processes, and part from a misassessment of action
rograms. Most of all they may be obsessed with the notion that
reeping out of trouble is an end in itself, a dubious reading of how

solution. She may change her way of looking at adolescents and come to feel that perhaps Mary needs more freedom than she had been willing to give her and warrants more confidence than she had been bestowing on her. Or she may find some way of communicating her concern to mary so that young daughter voluntarily curbs her own behavior. In any case, Mrs. Everymother will not easily be satisfied with any less than dealing with Mary's originally disturbing behavior.

Mr. Everyman may not end by bodily throwing the rascals out of the government, but he will want to come to some conclusion satisfactory to himself. He may find on closer inspection that some of the behavior of his representatives is the function of situations which need to be changed; or he may discover orderly processes by which he can assure that a better group of folk get in office. In either case, he has found a solution to a problem and he probably would not be satisfied any other way.

Skirting the Prejudices

4. The *deep-laid prejudices* of adult students probably ought to be *skirted* in the opening sessions of any adult group. This principle may appear to be contradictory to the hoped-for-outcomes of any adult education enterprise. After all, are we not supposed to change these bundles of uninformed superstitions and misleading facts into rational, clear-thinking human beings? But skirting the prejudices seems to be a necessary precaution in terms of what we know about adult students.

All of us have unreasoning prejudices regardless of the degree to which we can change our behavior through informed judgment. Many of these prejudices we have so continuously cherished over the years, that they have gotten stamped into our nervous systems and cannot be gotten out

prejudices and get on to safer topics until he knows the emotional as well as intellectual proportions of his group. When he has his feet on the ground, he can find methodologies suggested by research.

Prejudices have a way of being siphoned off or transformed when people who have prejudices about one another ignore the grievances and work together on common problems. These same people can handle themselves reasonably well also, if they are of approximately the same or similar socio-economic class.

Sociologists and psychologists, as a matter of fact, can suggest many helpful approaches if only the adult leader will heed them. If the latter uses the information so provided, he can contrive situations having optimum conditions of comfort for himself and his adult group members, in the reduction of prejudices and inter-group tensions.

To Extend the Horizon

5. As a final injunction, the horizons of adult students ought always to be *extended* by any adult education experience. This principle is a kind of imperative if we wish to deserve our title of educators. Though the principle itself might be observed incidentally as an outcome of the problem-solving method, it is of enough importance in itself that the adult educator can afford to put it high on the list of outcomes of the educative process.

There are two interrelated phenomena in modern life. One is that to many deeply pressing problems of human existence, there are presently no solutions. This has been put very aptly into a guiding definition of an adult: the mature individual is one who can learn to live in an uncertain universe. The other phenomenom is the one which has come into awareness of the adult public only

be extended by improved research and practice, but he may fall prey to a still unconquered disease, and his life extension is relative, not absolute, He may see an alleviation of the cold war, but it may never entirely disappear in his lifetime and he may have to learn to live with unsatisfactory armed truces, meager victories, and mounting tensions.

He can, and many adults in recent years have been doing so, turn to the church. But some ministers have asked whether these adults have found faith through conviction or are escaping reality. They have been asking whether adults are mature enough to be adults in modern America. The adult leader, whatever the area in which he is operating, ought to feel a moral obligation to help his people to live with themselves through helping them to live with uncertainty.

But adults live with many kinds of uncertainties for which there are solutions; and they worry with supposedly insoluable problems for which there are answers. They constantly enjoy the fruits in their improved circumstances, of the vast volume of work which is already available. Thus Mrs.-Everymother is happy that her daughter is protected from polio, and she may credit it to Dr. Salk who so brilliantly picked a serum out of a test tube. But Dr. Salk himself paid tribute to the long lines of researchers who had preceded him and who often for the sake only of feeding their curiosity had developed the theoretical foundations for an understanding of disease and had supplied the pieces which he had put together.

Mr. and Mrs. Everybody enjoy symphonies without thinking about the centuries of study that have gone into developing musical forms; drive cars and run electric gadgets without connecting up their existence with the history of physics since

management of the universe will depend largely on how we manage ourselves. And this latter task we can pursue with profit only if we see clearly the relationship between pure research in the behavioral sciences and improved practice in human relationships. When adults in democratic societies are willing to budget as much for the study of themselves as for a new weapon, then will their horizons have expanded in accord with their potential as intellectual beings. To assist them in this enterprise is the final charge of the adult educator.

A PROGRAM FOR ADULT NONREADERS

Stanley L. Rosner and Gerald Schatz

AN ERRONEOUS ASSUMPTION underlies programs for adults who can't read or who have limited reading skill-namely that they have never had any previous training. Yet after four to 12 years of schooling, many individuals are still functional non-readers. The problems that these people present for society and themselves are generally extremely complex. In the Reading Clinic at Temple University we see many adults who required special educational training early in their school careers, but it was not provided for most of them. The demands made on those of us who deal with people with learning problems seem to be increasing.

Obviously, the inability to read creates difficulty in a number of spheres of an individual's life. Economically the nonreader is at an extreme disadvantage. It is difficult to forget the plea of a 20-year-old nonreader wh came to the Clinic, bitterly noting that he could not even get into the army. The limited financial resources of these people and their families often prevented them from doing anything about their problem until they were well beyond the ordinary age for reading help. Those who do marry generally are faced at some point with a son or daughter who is better able to handle the basic tools of learning than they have ever been. The inability to read creates strong feelings of inadequacy and anxiety.

On the basis of our experience with a few such adults who had tried many of the group programs of instruction (including

Evaluation

A testing program which ordinarily evaluates college students and educated adults before they enter an advanced skills course was the one into which many of these individuals came by mistake. After having screened out a number of the "nonreader," a more suitable program of evaluation was devised and the instructional program was initiated. The core of the evaluation consisted of a brief history-taking interview, a vision screening, the verbal section of the Wechsler Adult Intelligence Scale (or where possible the total test), a word recognition measure, and an Informal Reading Inventory (a diagnostic way to evaluate reading in terms of both word recognition and comprehension), a spelling test, a test or two which screened the personality area, and in the cases where it seemed warranted, an associative learning test.

Interviewing helped us to evaluate the type of reading instruction the individual had had in school and in any specialized programs with which he may have had contact. In addition, it enabled us to find out something about the life situation of the individual and to get some initial leads in determining what might have been the etiological factors in the development of the reading disability. The feeling of utter hopelessness which these people seem to generate was best expressed by their constantly asking, "Is there anything that can help me to learn to read?"

Ten adults who were evaluated and who participated in the course typify the population we have dealt with during any given period of time. Their ages ranged from 18 to 42, the average age being 27. Of the ten individuals in the group, eight were married, one was divorced, and one was single. There was only one female. There were seven whites and three Negroes. Three were factory workers; the others had jobs with little responsibility and meager

of potential was a single subtest score markedly above the others. The I. Q. scores of this group ranged from 82 to 111 with a mean score of 97. A striking aspect in the functioning of these people was the wide scatter of subtest scores.

A comprehensive measure of reading ability provided us with information about the individual's skills. In addition, it pointed out those weaknesses which most needed attention. Weaknesses were frequently found not only in the mechanical aspects of recognizing words, but in understanding, retaining, and organizing material as well. Word recognition scores ranged from a total absence of sight vocabulary to an ability to adequately perceive words at the fourth reader level. Where fourth-level word recognition was found, it was accompanied by serious comprehension needs, which led to this individual being classified in the "adult nonreader" group. Overall reading ability tended for the most part to be far less effective when this was determined by the instructional levels established on the informal reading inventory (95% word recognition and at least 75% understanding). Functioning according to these criteria suggests needs ranging from reading readiness through low fourth reader level. In the latter instance, we were dealing with an individual who could not apply his best skills with any consistency.

In no case was spelling ability above the second level, and half of our sample population of ten could barely handle first level spelling words.

Vision referrals were warranted in six of the ten cases on the basis of inadequacies noted on a *Keystone Telebinocular.* Associative learning difficulty severe enough to indicate neurological impairment was noted in half the cases. The *Gates Associative Battery* test provides a controlled situation similar to

In discussing the results of the testing with these people, we pointed out their strengths and weaknesses, being extremely supportive. We provided "financial counseling" so that they could arrange to finance their entrance into the program. This counseling often consisted of helping an individual get tuition for the course from a relative or good friend. Although tuition was minimal, it was still necessary to work out a partial payment plan and in some instances provide scholarship aid. It was also necessary at times to aid students in finding employment so that they could pay their own tuition.

Instructional Program

Effective instruction in reading demands that the reader bring a good bit of skill to the learning situation. In a special program designed for adults with remedial problems, the criteria used were 95% word recognition and at least 75% comprehension. Instruction was initiated at the level where each individual demonstrated this level of functioning. The adult may have developed spelling skills to a far greater extent than his reading, or vice-versa. As a result, instruction in these two areas had to be initiated at two different levels. Even within reading, word recognition and comprehension were widely separated. As stated by one student, "If I can read it, I can understand it." A pattern of instructional needs emerged which was different for each individual.

Instructional Techniques

In General, two fundamental approaches to the teaching of reading—experience and basal—were used in the program. The experience approach utilizes the vocabulary, language and experiences of the individual learner as the material to be read.

of new words is paced, the number of repetitions per page is pre-determined, and sentence length increases with the difficulty level of the material. In short, this is an attempt for a formally systematic presentation of reading material. The basal approach has been traditionally used in the teaching of reading from the fundamental levels on up. There are various interminglings of these two approaches.

In this program, basal instruction was provided for the adults at a level where they could function without undue frustration. The structure of the directed reading activity was always utilized. In this activity the student is motivated before the story is introduced. The motivation may take the form of a question or point of discussion. Background information for handling the material is discussed and. if necessary, expanded before reading. A vocabulary-developing step may be coordinated into the motivation phase of the directed reading activity. New or relatively unfamiliar words are introduced to the person in meaningful context. The context of their introduction should not give away the story content, but should serve as an aid to the recognition of the word when it appears in the material. Not all suspected new language needs to be introduced before the actual reading. Some of it may be learned from the context of the reading. In fact, adults rely heavily on contextual clues to unlock words.

The setting of purposes was crucial to instructional aims. The purposes for reading with our group tended to be of two types: general and specific. The general purposes required an inference based on the entire content of the material. A specific purpose may seek the retention or understanding of a single bit of information or series of facts. These were alternated and at times combined to fit skills and the nature of the material that

important when dealing with students having specific comprehension difficulty, where the misinterpreting of the material compounds itself if not immediately handled. When later understandings are based on previous misunderstanding, the resulting comprehension becomes very confused.

Silent reading always precedes oral reading since the student should have the opportunity to work out the language and comprehension of the passage on his own before being requested to read aloud. If the nature of the selection and discussion does not warrant it, oral reading may be omitted totally. After each silent reading, comprehension or understanding of the material is checked by questioning and discussion. Questions on the information may require factual or inferential recall. The degree of questioning also varies. Passages are sometimes analyzed in great depth. At other times in an effort not to slow down the process of reading, a few understandings are merely tapped and the reading of the story continued. Vocabulary is also checked to determine whether the new words previously introduced were recognized in context.

At times an oral re-reading of specific passages is done. As with the initial reading, purposes for the oral reading must also be established. Narrative material often lends itself to play-acting or role-taking. The process of motivation, vocabulary development, purpose setting, silent reading, comprehension checks, and possibly silent or oral re-readings is replicated with each new section of a selection as well as with each new selection.

The directed reading approach may also be applied to experience material. A limitless variety of experience materials can be developed with adults. Here we will describe the experience story as used in this program at one stage of development. The

OF

075
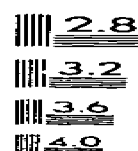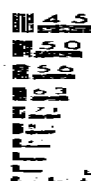
The stories are initially dictated to the teacher and later written by the student with the teacher's help. This student-centered activity can immediately establish the teacher's interest in who the student is and what his problems are. In the beginning, it sets the adult student at ease and gives him a feeling of success. None of the adults in our program had ever dictated a story to someone else, or for that matter, dictated anything at all. Such persons are passive and submissive. They feel inadequate and insecure. The dominant role provided them in story-writing has more than just educational rewards.

With some individuals, a certain amount of structuring is necessary when applying the activity. In general, we must first drop back to questioning, which elicits a story. Occasionally, questions themselves just provide the context for their own answer. As has been suggested, the development should proceed from dictating to the teacher to writing by the student himself, ultimately with little assistance from the instructor, who may become an interested on-looker. These stories then can be typed and used for many other kinds of activities.

Certainly they are used in a directed reading activity following the same steps and procedures already outlined. The vocabulary and language of these stories can be used in word learning techniques. It is remarkable to note that vocabulary that otherwise would be classed as well above the level of competence for these persons can be readily learned when it comes from the student's own need for expression. In the beginning, no attempt is made to correct grammatical misusage or to change the organization of material. later structural language skills are introduced and developed at a paced rate. The student is never overwhelmed by the number of his mistakes. After a long period of time, early stories are reviewed. At this time the student has developed more skills and spontaneously corrects, develops, or alters the former stories. He often has the pleasant task of wondering how he could have ever written that way. This is one dramatic way of showing the student his progress.

Experience activities are often used in group work. Units on climate, weather, aviation, and job-finding were all developed in small group activities. Initially, brain storming for information

from the group is used beiuie any reading is started. The approach does not negate the possibility of using other resource material or other reading materials of whatever level. The teacher often has to rewrite materials, writing them do.vn for the group. However, the level of reading that can be reached when motivation is high is often remarkable. Word recognition problems, which in the group are handled by a variety of approaches, are adapted and altered as their usefulness appears to wear off. Certainly workbooks dealing with phonetic analysis are often most helpful. Teacher-prepared material and some exercises in the area of phonics and structural analysis are also utilized. Occasionally nonsense stories and rhyming exercises are used. These may be created by the student or composed by the teacher.

A specific word learning technique modified from the Fernald Technique and utilizing visual, auditory, kinesthetic, and tactile stimulation is helpful in developing word perception and analysis. Briefly this technique requires the utilization of the four mentioned sense modalities in the learning of words. For persons having extreme difficulty learning through sight and sound, the additions of other modalities has been useful. The technique requires the meticulous tracing of the word as well as seeing and saying the parts of the word as this tracing continues. To have "learned" the word, two successful reproductions of the word by the students must be accomplished. Modifications of the most formal application of this approach to word learning were made because of time restrictions and because it was found that good results could be achieved in a shortened, less demanding use of the technique. In given instances, wives, sisters, and other family members were instructed in this technique and became participants in our program by enabling us to extend learning beyond our limited time in class.

As you may imagine from the detailed nature of the instructional procedures outlined above, it was necessary to have a good many different activities going on at the same time. When one considers a class of ten people, the teacher-pupil was ideally considered to be one to three. This was handled with one overall supervisor of instruction and two people qualified in the basic

with adults. Initially, instruction was handled on two evenings a week for approximately two hours each session. The absentee rate necessitated making the instructional period three hours or slightly more one evening per week.

Summary and Tentative Conclusions

The program is continuing, and a student may take as many ten-week units of instruction as needed. The results have been mixed. The problems which create a student's inability to profit from the instruction are frequently those created by his reading problems—financial need, personal adjustment problems, etc. The gains made by many students have led to employment, job advancement, and such things as getting a driver's license (a major victory for one student). We have much to learn, but it seems that the students are developing as we learn. The very real need of making each man an independent functioning member of society appears to be advanced a little with each passing week.

APPENDIX

The following is a list of instructional materials used during the limited time with the group described. It is by no means an exhaustive list of appropriate material for even this group; it is only a sample of what was used.

I. COMMERCIAL MATERIALS

Botel, Morton, *Multi-level Speller* (Chicago, Ill.: Follett Publishing Co.).

Coleman, James C., Frances Berres, Frank Hewett, and William S. Briscoe. *Deep Sea Adventure Series* (San Francisco, California: Harr Wagner Publishing Co., 1959-1962).

Goldberg, Herman R. and Winifred T. Brumber. *The Job Ahead* (Chicago, Ill.: Science Research Associates, 1963).

Halvoiser, Mabel, Mary Meighen, and Marjorie Pratt, *Phonics We Use* (Chicago, Ill.: Lyons and Carnahan).

News For You, Levels A, AA, B (Syracuse, N. Y.: Robert S. Laubach).

Parker, Gordon. *Great Moments in American History* (Chicago, Ill.: Follett Publishing Co.)

Readers Digest Skill Builders (Pleasantville, N. Y.: Readers Digest Services. Inc., Educational Division, 1959-1965).

Road Signs Filmstrips (Cerrito, California: Long Filmslide Service.)

Rochester Occupational Series (Chicago, Ill.: Science Research Associates, 1963-1964).

Tripp, Fern. *Reading For Safety* (Dinuba, California: Fern Tripp, 1962).

Turner, Richard. *On The Telephone* (New York: Bureau of Publications, Teachers College, Columbia University, 1964).

II. OTHER MATERIALS

Since these materials are not readily available and would be too extensive to list, further information on them may be obtained from the authors at the Reading Clinic.

1. Applications and catalogs from various training schools.
2. Experience stories dictated or written by the students, typed and prepared for instructional use.
3. Job application forms secured from employers.
4. Instructional booklets for new employees in local business and industry.
5. Instructor-prepared material individualized for members of the groups.
6. Programmed Basic Number-Fact worksheets.
7. Class prepared auditory and visual discrimination materials.
8. Selected paperback books.
9. Selected bibliographies of books prepared for individual readers.

TEACHING ADULTS TO READ WITH TEACHER-MADE MATERIALS

Frances Lane Harris

IN THE STATE OF WASHINGTON illiteracy is only .9% according to the 1965 NEA Ranking of States, yet there were 12,828 adults who said in the 1960 census that they had less than one year of schooling and 41,014 who had completed one to four years only.

Most of the ones I know seem intelligent and are well dressed, many are employed. Some work as laborers in lumber or plywood mills or other industries, and some work as carpenters, truck drivers, longshoremen, butchers, or welders. But what a feeling of inadequacy they have! A typical comment is, "My son is in the third grade and he can read anything. I must learn to read too." Another, wanting homework so as to learn even faster, said, "I can't start my homework until after 9:00 because that's when my boy goes to bed and I don't want him to know I can't read." One wife said, "I tried to teach my husband to read but he always said his eyes hurt or he was too tired. When he first came to this class his eyes hurt too, but he kept coming to class anyway, and now they don't hurt any more." One spoke of a friend who tried to teach him, "but he didn't go back far enough and he expected me to learn too fast." Another quoted himself as telling his wife, "Teacher doesn't yell at us."

Remarks like these reaffirmed my desire to help these people to learn to read and write. The Economic Opportunity Act has established classes in Basic Adult Education. I happened to be the first teacher to have such a class in our area. Because I had no instructional materials at first, I was forced to construct my own. Later, while using some published materials, students made remarks such as "I liked it better when you wrote those stories." I

believe that there are some advantages to teacher-made materials and that the readers of the *Journal of Reading* may be interested in some remarks concerning my methods.

My class consisted largely of men who could read and write only their own names, but most of them could form letters and knew the names of most of the letters. Some knew letter sounds and a few words. Others who could "read" were put in another class with a second teacher. My problem was to teach consonant sounds to some, to review with others, to start building a basic vocabulary, but most of all to hold their interest and help them feel that they were learning and could continue to improve.

I started by teaching consonant sounds using several methods but especially one of writing lists of words which the students would supply themselves, listing as many words as they could think of for one initial consonant sound. I usually wrote these words on an overhead projector but a chalkboard was satisfactory too. When we had a dozen or more words beginning with this consonant we read the list orally before going on to another consonant. The words adults suggest are not necessarily the same ones that children would think of in a similar lesson. They did serve the same purposes of focusing auditory and visual attention on initial consonants. Writing the upper and lower case form of the consonant at the top of the list emphasized the letter under consideration. I always wrote the list in manuscript writing, explaining that it looked more like the print in books and that manuscript writing would be useful in filling out any forms, especially those that say "Please print." The process of listing their words gave the flexibility needed in a group with such a range in knowledge. For the beginners, recognizing the consonant sound was the one goal, with little memory of sight words. There was opportunity, however, for any who were ready to remember the total word form to build up a vocabulary. Some found themselves remembering forgotten words.

All this was a necessary preliminary to being ready to read about something interesting. Enthusiasm grows in these adults when they learn something about their own community while they are learning words. My most successful lessons centered on stories I myself wrote for a particular group of students. Yes, it

took time, but since the stories were very short it was not as difficult to do as one might think.

My main source of information was the local newspaper. For example, I wrote a series of stories explaining an oil drilling rig which was currently rising on our skyline. Since it was a subject of community curiosity, a newspaper article explained some details of its construction and that it would soon be launched into the Columbia River and floated downstream and thence via the Pacific Ocean to Cook Inlet in Alaska. From this one detailed newspaper account I had basic facts for stories which made a series of lessons for adult beginning readers. These stories had a lot of compelling interest and, in addition, gave these illiterate adults information that they could explain knowledgeably to their families and friends.

For these stories I tried to limit the vocabulary only moderately. However, I typed them in very large type which only allowed about 12 lines to a page, composed short sentences of six to eight words for added ease of attack, and prepared a prereading sheet for word analysis so that before the student tried to read the story he had been guided in vocabulary study. The worksheet also involved him in marking root words, endings, and various other aids toward word analysis. Sometimes I selected words from the story and placed them in columns according to the vowel rules they fit. Sometimes I made columns of a dozen identical words in mixed order, each column a different form such as lower and upper case, manuscript, cursive, or various sizes of type. The student found the corresponding word in each column and drew a connecting line.

Usually I presented much of the word analysis on the overhead projector or chalkboard before the students did the worksheets. Silent reading of the story followed completion of the worksheet. During this reading time I supplied words to those who had difficulty remembering so that more fluid reading would aid in comprehension.

After most students had completed reading the page silently, I found that they felt comfortably reinforced by re-reading it together orally. It must have sounded like an old-fashioned school, but the togetherness seemed to appeal. The shy ones might not

join in aloud at first, but their eyes followed the words and eventually they felt confident enough to join in.

This method of using short teacher-made stories had several advantages. There was high interest in the content. Individuals sometimes added special knowledge to supplement the information because it was a local story. It served as a vehicle for structural and phonetic analysis which could fit a wide student range of ability. Since the story was short, all words could be analyzed for the benefit of beginners or for review, but the freshness of the topic and the natural vocabulary provided something new for everyone. Since it was written for an exact group of students, the teacher could more nearly meet their diverse needs than anything in a book could? the teacher was aware of the degree of difficulty in reading level as well as of the appropriateness of the topic in relation to student culture and background.

James T. Olsen, in the October, 1965, *Journal of Reading,* discussed some problems that educational publishers have in preparing instructional materials for the varied needs of the adult market. A teacher preparing her own materials may be able to fit the interests and needs of the class better than a publisher who tried to publish for the average or composite students.

In the March, 1966, *Journal of Reading,* Stanley L. Rosner and Gerald Schatz discussed another way of writing personalized stories by having the student himself dictate the story. They said, "It is remarkable to note that vocabulary that otherwise would be classed well above the level of competence for these persons can be readily learned when it comes from the student's own need for expression." I have found this also true of the short teacher-made stories written on a topic of local interest.

Thus teacher-made stories can serve as a vehicle for vocabulary building as well as phonetic and structural analysis. Perhaps the grestest advantage is interest in the subject matter because it is written to fit the particular class and uses topics of local interest. Our local newspaper has contained information on which to base many stories this past year. Another popular theme was that of local history with stories giving informational background for points of historical interest where families might visit. A brochure available at one of the city museums provided

accurate, concise facts needed in writing the series on local history. Other lessons centered around words seen every day. These evoked surprising comments. There was an argument one night about stop lights because a differing lights that read "WAIT" or "DON'T WALK." After a lesson using street names, one man who worked on a garbage truck began noticing street signs. I was surprised to realize how many different highway signs we encounter daily. Some lessons compared the appearance of the words on these signs when they appear in their capitalized forms. The important point is that a teacher can easily find subject matter for simple lessons which will interest beginning adult readers.

I would like to add a thought concerning primary teachers as adult literacy teachers. A primary teacher is familiar with the gradual steps for teaching beginning reading. The sequence of skills for developmental reading is automatic to her. If she is a resourceful person she can easily adapt materials to adults. Teachers used to working with older children probably find it difficult to go "far enough back" and to progress with the very small steps that are needed by adults who are beginning readers.

A primary teacher only needs to keep in mind that these students are adults and should not be treated as children. Perhaps it is best never to mention that she teaches children or to refer to anything she does with her daytime class. I found this surprisingly easy to do. After all, the adults were there before me and their maturity and background of experience were obvious. I was very aware of their sensitivity about their shortcomings and always tried to weigh my words to avoid anything that could possibly hurt any feelings. But this seemed as natural as with any adult whose friendship one values.

Work with adult literacy is a fascinating kind of teaching, for it would seem that all of a teacher's ingenuity and resourcefulness can never be quite enough to teach all kinds of students fast enough. Yet the little cumulative successes bring the kind of emotional regard that make a teacher proud to have persevered.

HOW SOME ADULTS LEARN HOW TO TEACH
Lois E. Hotchkiss

Sometimes it happens that a startling truth jumps out at us almost by accident: we take a look at an old, well-known subject (e. g. adult education) through the prism of a new technique (e. g. programmed teaching) and the murk clears. Problem-solving ideas germinate which were not even incipient just a moment before. An 'instant' cross-fertilization occurs. At such moments growth can come in quantum steps.

Precisely this is taking place now in Los Angeles at the Demonstration School for Adults, a one-of-a-kind experiment in this country. The DSA, now in its second year of funding under Title III, is located in a 40,000-square-foot former supermarket, converted into a laboratory of and for adult education. Its mandate is "to create, develop, and utilize new methods, curricula, and materials to serve adults from all walks of life and motivate efforts toward self-realization...to develop methods, courses, and materials that can be adopted by other adult schools."

The experimental school's program is offered through five "centers" or divisions: Self-Improvement, Career Orientation, Humanities, Family Life and Creative Arts. The Self-Improvement Center includes: (1) a Language Laboratory unique in the teaching of adults in America; and (2) the Guided Study Center which, under Coordinator Louis Van Phelan, is used for experiments in programmed teaching. It is from the latter experience that adult educators can learn problem-solving techniques which may have immediate application for a broad variety of voluntary agencies and institutions offering continuing education.

Significantly, Mr. Van Phelan is not new to the field, having taught adults for the past 10 years. Also of significance is the fact that DSA, although part of the Los Angeles City Schools, is free of reliance upon ADA, a fixed semester timetable, night class

orientation, and many of the other conditions which public adult school personnel usually live with.

Why does the absence of these restrictions make such an enormous difference in the use of programmed learning for adults? Why can one see new horizons resulting from Van Phelan's work at DSA when they were not that visible before? (Fourteen out of 29 of Los Angeles' Community Adult Schools have similar Centers based on his prototype.)

In addition to the all-important difference of subsidy instead of revenue from average daily attendance, one answer certainly is implementation. The DSA is designed *solely* to innovate and not to do adult education business-as-usual. Rather than renting or borrowing quarters from a day high school, it was facilitated by a grant which provided its own locus, equipment and faculty. Van Phelan's original class, in a conventional public adult school (University Community Adult School) is also free of time clock (semester plan), graded classes (the lockstep of sequential curricula), and academic departmental boundaries. This same pattern has been followed at DSA but under deliberately experimental conditions.

To see how other adult educators could follow this pattern, let us explore why (a) programmed teaching and (b) continuing education are a natural match. Some of Van Phelan's findings are fortuitous for those who seek lifelong learning, some for those who provide it—administrators and teachers, and some for both camps.

Adult Students

1. Adults, even more than children, learn at different rates of speed. This variance in mature enrollees is heightened by the background of each one's life experiences. They are less adept at rote learning because they lack the *tabula rasa* of youth. Also *involvement* in the learning experience is vital for men and women. The lecture method, therefore, is generally inadequate as we have known since Kurt Lewin's studies of a quarter-century ago. [1]

With programmed teaching, the teacher is free to tutor (he may also cluster two or more students with the same problem) while the other adults in the class follow programmed texts at

their own speed. Van Phelan created assignments (e.g. (a) write a composition and (b) write a critique of the latter 24 hours later.) He then tapes his comments, bringing students the personal element of his voice—infinitely more meaningful than red-penciled jottings in the margin.

2. Adults often fear taking classes because they dread making mistakes (an inevitable part of the learning experience) especially if their errors are visible or audible.

With programmed teaching, the student is on his own. Only he gets the immediate feedback which signals the need for more work in certain areas. In addition to answering questions, Van Phelan divides his time almost 50-50 between two major kinds of individual attention: availability and reinforcement. Thus he is really saying—"I'm not going to stand over you but I'll help you when you need help" and "—you're doing great!"

3. Adults, unlike children and young people, attend school peripherally; it is not their full time responsibility to be a student. Work and home tasks, financial and personal problems, civic and social obligations plus many unexpected involvements impinge upon their attending classes. Where does this leave an administrator who must plan so-many offerings with a minimum attendance, whether for fee income or ADA? Partly because they are volunteer learners, adults drop out less often due to waning interest than to the built-in priorities on their time—and energy.

With programmed teaching, the student gets credit when he completes a subject (if it happens to be a credit course). He may come to this demonstration School Center, for example, morning, afternoon or evening five days a week. Van Phelan encourages enrollees to study at an advanced level whenever they are ready. no arbitrary norm is set. If their rate of progress is slow or if they have unavoidable absences, no penalty is imposed. (It is important for adult school educators in less permissive institutions to realize that the head count of students actually present during any period always will be less than the daily attendance of the class. As attendance grows, this will level off so that even the most rigidly conforming administrator can relax with the seeming inequity.)

4. Adult students usually cannot enter a class at the moment they get the urge to learn;—they must adjust to the school

elementary and secondary school, but, rather, the range of reasons.

Incentive or Appraisal

Instead of being depressed by having to receive a grade, many students expressed the opinion that anticipation of receipt of a final grade was an incentive without which the student would not work as hard nor accomplish as much. Many others looked upon the grade positively as a helpful evaluation of progress rather than as a punitive measure. Further, there were several who wanted to find out whether the instructor's rating agreed with the student's own evaluation of his work. Other recurring reasons included personal satisfaction and guidance for future study.

One student stated the motivation case as follows, "I think it sets a goal for us to achieve if we have a grade to work for," while another said, "Educators should know by now that the human being is inherently lazy and only works when he has to."

Evaluation was supported by such statements as, "Out of curiosity as to whether or not I have learned what was expected," and "Feel this is necessary in order to know whether subject being studied is being learned. Do not feel qualified to determine this myself."

Comparative evaluation was stated as, "To see if the teacher places the same value on the knowledge I think I have received," and "It helps the student realize, to some degree, his achievement as judged by a second party-the professor."

The guidance implication cropped out in statements like, "To serve as a guide as to whether additional studies may be advisable," and "To find out if I should go on to the next course or take this one over."

Miscellaneous replies included the following:
  To see how I fare in a competitive situation.
  To show my boss, and to prove I'm ready to go out on the road selling.
  Company will provide tuition refund.

evening study and generally require grades as evidence of accomplishment or diligence does not appear to have too much of an effect on the desire for grades. There were 273 students who said they needed grades for company refunds of tuition, but only 115-less than half-gave the reimbursement as the only reason for wanting a grade. There were 158 who gave additional reasons such as self-satisfaction or evaluation of achievement.

Interestingly, of the 115 who sought the grade solely becau of necessity, only 42 wanted no examination.

Examination and Learning

If the myth has real substance, it might be expected to appear in connection with examinations but two-thirds of the students asked for both grades and tests. As indicated above, there were 189 who wanted grades without examination, and they were partially offset by 88 who wanted examinations but no grade. Here, as with grades, the reasons as well as the numbers appear to provide refutation of the myth.

Examinations were supported as a learning device rather than as instruments of torture. Even among those who commented on the pressure of an examination there was positive side were the necessity of organizing material for presentation in the examination and the opportunity to verify what is considered important in the course. The examination was also defended as a check for the instructor.

The value of the examination as an aid to learning emerged in statements such as, "Examination should bring out most important phases of course, and if not known at exam time, at least one will be able to study them later," and "To make me think-to help me crystalize ideas-to find out how much I don't know." Other strong statements in support of the examination included, "As much can be learned for an examination both in a positive and a negative aspect as is learned during lectures and home study," and "The easiest method of determining whether or not I have understood the material presented is through the use of a written exam. Only when you can express your thoughts on a given subject will you fully under-

denote understanding of the subject. If your instructor can understand your thoughts (through grading of an exam), you, as the student, can feel that you understand the subject."

Pressure was recognized in the statement, "Nerve-racking but necessary toward an honest appraisal by the professor of my knowledge of the course."

A practical point of view was reflected by those students who thought the examination might be useful to the instructor. One commented, "So the teacher can see what parts of the course the largest percentage of the class fail to understand and can put more stress on those points in the future." Another said, "I would like to see how much the instructor feels he has covered," and still another wrote, "To see if the teacher places the same value as I do on the knowledge I think I have received."

The Other Side

About twenty per cent of the students wanted neither grade nor examination, and some of them stated their cases well. They tended to discount the grade as an incentive and several pointed to the record- keeping uselessness of a grade since credit toward a degree was not involved.

As one student wrote, "I am more interested in the information obtained. A grade is like a reward. There is no standard of grading and what would be an excellent grade with one instructor would only rate fair with another. Too often students study for the grade rather than accomplishment."

Two others declared, "It is meaningless and not an incentive to study. If I want to learn, I will study, and receiving a grade for the course will not alter my feelings," and "I won't know any more about the subject with a grade or without a grade. My motivation is to learn, and the work I do will not be affected whether I receive a grade or not."

The uselessness of a grade was reflected in the statement, "Having received a Ph.D. in Chemistry from —— University, I can't see any purpose for obtaining a grade in this course." Another student said, "I'm taking the course as recreation from employed and volunteer responsibilities,"which implied agreement

pleasure and working for a good grade might spoil it for me."

Practical objections to grades appeared in the following: "Receiving a low grade might discourage my company's interest in me," and "I don't have the time to study enough."

No Examination, Either

A major reason for not wanting to take an examination, in addition to lack on interest in receiving a grade, was the fact that a class session devoted to an examination would eliminate a lecture or additional discussion which some students felt would be more productive as a learning experience than a test would be. There was, also, a substantial amount of comment about pressure and nervousness.

Some of the statements were pretty strong, such as the following:

Examinations are a waste of valuable time in which more could be taught. They prove nothing except that the student can take an exam without getting nervous and making simple mistakes.

If a grade is based on exam, I don't want to waste a night taking the exam. I'd rather listen to a lecture. A grade for class participation seems unfair. Some students are familiar with subject- many are not. Also, I'd like to use study time for what I want to know- not what I think may be on an exam.

The psychological problem of examinations was indicated by students who asserted, "The pressure of exams takes away the joy of learning," and "Exams make me extremely nervous and I seem to forget the answers due to my nervousness." One student said, "I'm self-employed and will retain that part of subject which I am particularly interested in to help me in my own business," and another stated, "I don't want to know how bad I was."

Competition, not Evaluation

Throughout the replies, regardless of position taken, recurred the expression that a grade was a competitive yardstick rather than

been mastered and where reinforcement was needed. Such an attitude may be taken to indicate that our culture emphasizes competition; it also may be taken to indicate that our teachers fail to use grades effectively in the educational process.

In fairness to the supporters of the myth it must be admitted that 51 of the students, in addition to those under company refund plans, had to receive grades because they were enrolled in certificate programs, short curricula for which a certificate is awarded upon successful completion of all the courses in the program. However, like the tuition refund group, many of the certificate students expressed a personal wish for grades for reasons such as those set forth earlier.

There were, also, 82 students who sought grades to meet or establish a qualification or criterion of their own choice such as to prepare for a professional examination, or to qualify for a better job, or to impress an admissions office. Some of those who had job qualifications in mind wanted the grades specifically for reference in support of a new application; others wanted to use them in present employment.

It must be pointed out, too, that the questionnaire was distributed among adult students enrolled in a program which consists of organized classes and not of discussion groups. It may be argued that in such adult education programs as discussion groups and community action projects there is no place for a grade, and the argument probably is valid for such cases. Unfortunately, the myth, which may have had its origin in discussion groups and community projects, has grown to encompass adult education as a whole.

In refutation of the myth, almost two thousand adults, a cross-section of the population in an urban area, indicated an overwhelming preference for grades in non-credit adult courses.

PART VIII

MATERIALS

MATERIALS, METHODS, AND PROGRAMS FOR LITERACY EDUCATION

Robert F. Barnes

Research in adult literacy education is moving slowly through its initial stage of development. The research reviewed in this chapter represents the bulk of the research conducted and reported in this field. For the most part, the research conducted thus far has been done by persons directly involved with adult literacy education; very little has been conducted by persons from disciplines related to education.

Materials

Developmental

Publishers Weekly (1964) reported the findings of a U. S. Office of Education task force in a review and appraisal of existing instructional materials for adult literacy education. The task force found "a serious shortage of materials for teaching basic reading skills, especially word recognition skills." Most materials stressed a suggested basic vocabulary instead of recognizing the vocabulary already possessed by adults. The materials were not aimed toward the sophistication and interests of the intended reader, nor were they written on a functional level to aid in teaching the skills of practical grammar, letter writing, and good speech.

Kempfer (1950) surveyed 56 librarians and evening school principals in the United States, asking them, "At what grade levels of readability is there the greatest shortage of suitable reading materials for adults?" The upper elementary levels were mentioned most frequently. These librarians and principals felt that the areas of citizenship, homemaking, and family life ad parent education exhibited the most acute needs. The validity of these results, which are somewhat out of date, depends a great

deal upon how closely the librarians and principals worked with adults of low reading ability.

Dale and Tyler (?34) tried to discover the factors influencing the difficulty of reading materials. They used samples of personal health materials with groups of adults who had low reading ability. The number of different technical words in a selection was found to be the factor most closely associated with difficulty of comprehension. Next in line was the number of nontechnical words in the selection unknown by 19 percent of sixth grade pupils.

Field Testing

To test the basic fundamentals of reading and spelling, Levi (1964) used 204 subjects from Chicago, 128 of whom were adults with an average schooling of 5.8 years. After 99 hours of prescribed instruction, the mean difference between pretest and posttest scores of these adults was 4.6, with a standard deviation of 0.65. These figures must be interpreted cautiously, however, since it is not exactly clear what this gain represents. Two of the tests used had norms based on elementary school populations, and no effort was made to utilize a control group.

A more structured experiment was conducted by Henny (1964b), who used the Family Phonics System with 30 inmates of a penal institution. These subjects were divided into three groups: a control group, an experimental group that received one-to-one tutorial instruction, and an experimental group that received group instruction. He found that 20 one-hour sessions increased reading ability by as much as 2.5 grade levels for the sessions increased reading ability by as much as 2.5 grade levels for the functionally illiterate inmates and that it made little difference whether the teaching- learning situation was on a group or on a one-to-one basis.

Another experiment conducted in a reformatory was directed by Allen (1961). The Laubach literacy films were used for instruction of 288 inmates, 108 of whom graduated from the program. The showing of the films required 49 hours, and extra

5.8 years but a mean measured eductional achievement score of 1.97. Those completing the course increased an average of 2.5 grades in reading, vocabulary, and spelling. The results must be viewed with caution since the sampling technique used was unidentified, no control group was used for comparison, and the test instruments had norms based on school children. Also, the results from the two previous field test efforts cannot be generalized because of the confined population.

Henney (1964a) again tested the Family Phonics System and apparently did not limit it this time to a penal institution setting. The improvement in scores ranged from 3.5 to 7.4 grade levels after 160 hours of instruction, and he reported a significant difference between the gains in reading ability of the members of the experimental groups and the gains of the control group. The results of this field test can be questioned because of the following limitations: the test instruments, the lack of a description of the control group, the apparent absence of any attempt to select a random sample, and the apparent absence of any effort to match the experimental and control groups.

Additional References. Cass (1960): Moore and Hendrick(1958); Neijs (1961); Ward and Brice (1961).

Methods

The interim report of the Norfolk experiment directed by Cooper (1964) relates the use of team teaching with four closely matched groups of "hard- core unemployed," the majority of whom did not pass the *General Apitude Test Battery.* The main experimental group was given intensive instruction both in general education and in technical training; the subsidiary experimental group received only technical training. The main control group was tested only at the beginning and end of the project, while the subsidiary control group received guidance and occupational information on a bi-monthly basis to test the Hawthorne effect. The intermediate results reported by Brooks (1964) showed that 90 of the 100 men in the two experimental groups graduated, and all of the graduates were placed on jobs, most in their respective

Peerson (1961) directed an experiment that involved televised instruction of illiterates with Laubach's *Streamlined English* and supplementary materials. Classes utilizing direct teaching were organized for those areas having poor television reception. One-fifth of tgroup of 608 subjects had a minimum of five years of schooling, and one-fifth had had no previous schooling, so the typical grade level was two or three years. After approximately 98 hours of televised instruction and review sessions, the groups were given a standardized test to compare these adults with a national norm of school children. On most levels adults' results compared with children's results about half way through the second grade. The data suggested that "television teaching is less effective than the person-to-person procedure in developing the skills of connected reading." Using these same televised lessons with Laubach materials, Holst (1959) reported the results of tests given to 61 enrollees. The total group was composed of interested home viewers and students enrolled in 31 Memphis centers. The average grade level achievement scores were at the 2.5 grade level or above, with the total average achievement at 2.8. However, no pretest scores were used, and a description of the sample was not given. The programming method was tried with adult illiterates by Crohn (1964). Intermediate data indicated a need for further training in visual discrimination and an increase in the use of context as stimuli support.

As a result of a 1955 survey of 30 programs, Cass (1956) identified some common problems of administrators, successful methods and techniques, training and recruitment practices, and a general overview of the structural organization of basic adult education programs.

Additional References Hilliard (1963); Olson (1963).

Service and Agency Studies

Since very little knowledge had accumulated on the actual performance of the uneducated group of inductees during World War II, Ginzberg and Bray (1953) chose a representative sample of 400 from the 303.000 illiterates received by the Army for training

community of under 5.000 persons, had completed more than four years of schooling, was single and self-supporting, and gave no evidence of having ever broken the law. Of the 400 selected, 343 graduated from this basic program. The evaluating criteria emphasized length of service, type of discharge, amount of time lost for medical and disciplinary reasons, and time of discharge (before or at the normal termination of his period of service). Of 331 graduates, 38 percent were rated good or very good in performance, 49 percent performed acceptably, and only 13 percent were considered a loss to the Army. In addition, about 50 percent of these graduates applied to the Veterans Administration for educational benefits after leaving the service.

Altus (1950) was interested in the relationship between vocabulary and literacy when intelligency is constant. He administered several tests to 156 illiterate soldiers whose mean IQ for all eight reading levels was 77, ranging from 75-79. He found that literacy and vocabulary were somewhat related, "through the effect of one upon the other appears to operate in rather narrow limits."

Brooks (1963) directed a study to determine the literacy level of people receiving public aid even though physically able to work. The sample consisted of 680 adults on relief, more of whom were Negro women from broken homes with a median grade completion of 9.5 years. Only 6.6 percent had not completed five years of schooling. However, when a standardized test was administered to each and the scores were compiled, 50.7 percent of the total scored below or at the functionally literate level (fifth grade reading ability).

Additional Reference: Altus (1950); DeGabriele (1961); Hertert (1963).

Conclusions

From the lack of basic and applied research in adult literacy education, and from the tremendous emphasis now being placed upon this aspect of education, it is apparent that without a great deal of further sound research this field will continue to be little

Well-designed research is badly needed in such related areas as sociology and anthropology so that teachers and administrators in the field may better understand the illiterate adult, his environment, and his society. Research is needed, too, in areas such as learning, motivation, teaching methods and techniques, and teacher training techniques.

The reviews of field testing that have been completed and reported point up a need for a sound design strategy for future field testing of instructional materials. Instructional materials must be developed to meet the needs of the adult illiterate. Finally, it appears that there is a real need to identify accurately the functionally illiterate segment of the population.

Bibliography

Allen, D. W. *An experiment in Education with the Laubach Literacy Course of Study on Films at the Ohio State Reformatory* Syracuse, N.Y.: New Readers Press, 1961. 89pp.

Altus, W. D. "The Relationship Between Vocabulary and Literacy When Intelligence Is Held Constant." *Journal of Social Psychology* 31: 299-301; May 1950.

Brooks, Deton J., Jr. *The Blackboard Curtain: A Study To Determine the Literacy Level of Able-Bodied Persons Receiving Public Assistance* Chicago: Science Research Associates, 1963. 167 pp.

Cass, Angelica W. *Adult Elementary Education.* New York: Noble and Noble Publishers, 1956. 275 pp.

Cooper, William M. *Training the Hard-Core Unemployed: A Demonstration-Research Project at Virginia State College, Norfolk Division (An Interim Report)* U. S. Department of Health, Education, and Welfare, Office of Education, Cooperative Research Monograph No. Washington, D. C.: Government Printing Office, 1964. 101 pp.

Crohn, Burrill L. "The Diebold Literacy Project: Programing for the Illiterate Adult." *Programed Instruction* 3: 6-7, 9, 12; No. 9, 1964.

Dale, Edgar, and Tyler, Ralph W. "A Study of the Factors Influencing the Difficulty of Reading Materials for Adults of Limited Reading Ability." *Library Quarterly* 4: 384-412; July 1934.

Ginzberg, Eli, and Bray, Douglas W. *The Uneducated.* New York: Columbia University Press, 1953. 246 pp.

Henney, R. Lee. *The Family Phonics System* Indianapolis, Ind.: Board

Henney, R. Lee. *Reading Instruction by a Phonic Method for Functionally Illiterate Adults at the Indiana Reformatory.* Doctor's thesis. Bloomington: Indiana University, 1964. 197 pp. Abstract. *Dissertation Abstracts* 25: 2812-13; No. 5, 1964, (b)

Holst, Howard, *Summary of the Literacy Project.* Memphis, Tenn.: WKNO-TV, Memphis State University, 1959. 4 pp.

Kemper, Homer. "Simpler Reading Materials Needed for 50,000,000 Adults." *School Life* 32: 115, 127; May 1950.

Levi, Mort. *Teamwork Foundation Student Test Results.* Chicago: Teamwork Foundation, 1964. 4 pp.

Peerson, Neil. *An Experiment, with Evaluation, in the Eradication of Adult Illiteracy by Use of Television Instruction over a State Educational Television Newwork Supplemented by Supervised Group Viewing and by the Related Use of Project-Supplied Materials of Instruction.* Florence, Ala.: Florence State College, 1961. 58 pp.

Publishers Weekly. " 'War on Poverty': Book Publishing's Role in Adult Education, Job Training." Report of Conference Sponsored by the U. S. Department of Health, Education, and Welfare, Office of Education, and American Textbook Publishers Institute. *Publishers Weekly* 185: 38-50; February 17, 1964.

Additional References

Altus, William D. "Adjustment and Range of Interests Among Army Illiterates." *Journal of Social Psychology,* 31: 295-98; May 1950.

Cass, Angelica W. *Americanization and Adult Elementary Education Bibliography.* Albany: Bureau of Adult Education, State Education Department, University of the State of New York, 1960. 26 pp.

DeGabriele, Eugene M., issue editor. "Guidance Services for Adults." *Bulletin of the California State Department of Education* 30: 1-97; No. 7, 1961.

Hertert, Patricia C. *An Analysis of the Characteristics of the Unemployed and Undereducated as They Relate to Program Planning for Continuing Education in Modesto* Modesto, Calif.: Adult Division, Modesto Junior College, and Modesto Evening High School, 1963. 73 pp.

Hilliard, Raymond M. "Massive Attack on Illiteracy: The Cook County Experience." *ALA Bulletin* 57: 1034-38; December 1963.

Moore, Clarence D., and Hendrickson, Andrew. *Annotated Bibliography of Materials for Teachers of Americanization and Literacy Classes.* Columbus: Division of Adult Education, Bureau of Educational Research and Service, Ohio State University, 1958. 12 pp.

Neljs. Karel. *Literacy Primers: Construction, Evaluation, and Use.* Manual on Adult and Youth Edacuation No. 2, Paris: UNESCO' 1961. 113 pp.

Olson, Muriel I. *An Analysis of the Laubach Literacy Method.* Muncie, Ind.: the Author (39 Mann Ave.), 1963. 38 pp.

Ward, Betty Arnett, and Brice, Edward Warner. *Literacy and Basic Education for Adults: A Selected Annotated Bibliography.* U. S. Department of Health, Education, and Welfare, Office of Education, Bulletin No. 19

INSTRUCTION MATERIALS
FOR FUNCTIONALLY ILLITERATE ADULTS

James Olsen

I

The "adult market" is actually many different kinds of markets. This market consist of the unemployed, the high school dropout, the rural and urban poor and the worker displaced by automation. According to Seymour Wolfbein of the U. S. Department of Labor, this market is also a teenage market because teen-agers represent the largest numerical group in this population. (In the 1960-70 decade, for example, there will be seven and a half million teenage dropouts and one-third of these will not even have a grammar school education.) At the same time, this market includes more than 2,000,000 adults for forty-five years of age who do not have the necessary academic skills to get and to keep a job.

To meet the variegated needs of these disadvantaged, educators have usually made up their own local ad hoc programs which have been tailored to fit the needs of a particular group of dropouts, non-English speaking immigrants, jobless workers, or the like. The immense diversity of these programs, the lack of a formal institutional structure like a public school, and the fragmented nature of the "adult market," have discouraged educational publishers from investing significant sums of money in instructional materials for adults. Basic questions like who these adults are, how they are organized for instructional purposes and who teaches them have remained largely unanswered.

Moreover, the 33,600,000 different adult education courses being given throughout the country, the age range of the "adults" taking these courses (15-65 or more), the methods of study (ranging from formal courses and correspondence courses to