

R E P O R T R E S U M E S

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NO LONGER SUPERFLUOUS, THE EDUCATIONAL REHABILITATION OF THE
HARD-CORE UNEMPLOYED. FINAL REPORT.

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MATERIALS, PROJECT EDREHAB,

THE SOUTH BEND PROJECT ON THE EDUCATIONAL REHABILITATION
OF THE HARD-CORE UNEMPLOYED WAS DESIGNED TO PROVIDE TRAINING
IN BASIC EDUCATIONAL SKILLS FOR 100 HARD-CORE UNEMPLOYED AND
ASSIST THEM IN DEVELOPING FAVORABLE WORK ATTITUDES TO EQUIP
THEM FOR VOCATIONAL TRAINING, DETERMINE THE EDUCATIONAL AND
VOCATIONAL CHARACTERISTICS OF THE GROUP, AND TO EXPLORE
INSTRUCTIONAL TECHNIQUES AND CURRICULAR PROVISIONS. OF THE
160 ELIGIBLE FOR ENROLLMENT, 108 ENROLLED IN THE PROJECT,
THOUGH 14 TERMINATED, USUALLY TO ACCEPT EMPLOYMENT, IN THE
FIRST WEEKS. THE PROGRAM CONSISTED OF TRAINING IN LANGUAGE
ARTS AND ARITHMETIC AND GROUP GUIDANCE ACTIVITIES. AT THE END
OF 20 WEEKS, THE TRAINEES WERE TESTED AND ON THE BASIS OF
RESULTS ENTERED VOCATIONAL TRAINING OR CONTINUED TRAINING FOR
ANOTHER 16 WEEKS. SOME FINDINGS WERE -- (1) A LARGE MAJORITY
OF HARD-CORE UNEMPLOYED WERE EDUCATIONALLY RATHER THAN
MENTALLY RETARDED, (2) IT IS HIGHLY LIKELY THAT SUCH
INSTRUMENTS AS THE CALIFORNIA TEST OF MENTAL MATURITY AND THE
G SCORE (LEARNING ABILITY) OF THE GENERAL APTITUDE TEST
BATTERY ARE INADEQUATE TO MEASURE THE LEARNING ABILITY OF THE
HARD-CORE UNEMPLOYED, (3) SEX DIFFERENCES SEEMED MORE
PROFOUND THAN RACE DIFFERENCES IN THE UNDERLYING
SOCIAL-PSYCHOLOGICAL-EDUCATIONAL-ECONOMIC DYNAMICS, (4) THE
UNDEREDUCATED HARD-CORE UNEMPLOYED COMPENSATED FOR
EDUCATIONAL DEFICIENCY OF FROM 1 TO 3 YEARS IN A 20-WEEK
PERIOD, AND (5) THE INSTRUCTIONAL EXPERIENCES WERE ASSOCIATED
WITH INCREASES IN BOTH EDUCATIONAL APTITUDES AND INVENTORIED
MENTAL ABILITY AND WITH CHANGES IN SOCIAL BEHAVIOR TRAITS IN
MORE MATURE, MORE SOCIALIZED DIRECTIONS. (MM)

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The Educational Rehabilitation of
The Hard-Core Unemployed

Final Report to the Office of Manpower, Automation, and Training, U. S. Department of Labor

June, 1965

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The Educational Rehabilitation of The Hard-Core Unemployed ,

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Final Report to the Office of Manpower, Automation, and Training, U. S. Department of Labor

June, 1965

PREFACE

The following report is based on a research project conducted by the South Bend Community School Corporation under contract with the U. S. Department of Labor's Office of Manpower Policy, Evaluation and Research (formerly Office of Manpower, Automation and Training). It was prepared by Dr. Nathaniel J. Pallone, Project Research Coordinator. The project staff also included Robert C. Riley, Director, Adult and Vocational Education, South Bend Community School Corporation, and Dr. Alex Jardine, Superintendent, South Bend Community School Corporation.

ERRATA

<u>Page</u>	
35	Group A, Male Caucasian should read
	8 4.175 5.814 1.7
37	Group C, Male Negro should read
	4 4.244 4.425 0.1
39	Group C, Male Negro should read
	4 4.000 4.750 0.8 (as is, rounded up)
41	Group A, Female Negro should read
	8 4.350 5.542 1.2
41	Group B, Male Negro should read
	12 2.650 3.018 0.4 4.792 2.1
43	Group B, Female Negro should read
	10 5.440 5.640 0.2 6.438 1.0
43	Group B, Male Caucasian should read
	12 4.147 4.725 0.6 5.250 1.1
44	Group B, Male Caucasian should read
	12 3.507 4.650 1.1 5.510 2.0

foreword

This is the final report of a research project focussing on a spectrum of dimensions related to hard-core unemployment among educationally deficient workers in a medium-sized city in mid-America. As a scientific report, it is required to maintain a detached neutrality and a certain sterility of affect. It hardly expresses the truly human and surely most significant values derived in Project Edrehab: the human, personal encounter between those who had been beaten and those who cared.

For assistance in the collection of data, the author wishes to express his gratitude to Henry W. Jurkowski, a member, for eight months, of the Project Edrehab staff.

For assistance in data tabulation, he wishes to express his gratitude to Messrs. Getty and Low, wizards of the computer for the South Bend Community School Corporation.

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one INTRODUCTION

IN DECEMBER 1963, the United States Department of Labor granted funds to the Division of Adult and Vocational Education of the South Bend (Indiana) Community School Corporation to implement a quasi-experimental Manpower Development Training Program designed to ready a group of hard-core unemployed workers to profit from vocational training by helping them improve the level of their basic educational skills. Concurrently funds were granted by the Office of Manpower, Automation, and Training, U.S. Department of Labor, to finance a coordinate research project focussed on the issues of the educational-vocational characteristics of hard-core unemployed workers and on attitudinal dimensions amenable to the facilitation of the development of educational skills.

An appreciable proportion of applicants and potential applicants for MDTA-sponsored vocational training programs operated by the South Bend Community School Corporation during 1962 and early 1963 exhibited sub-minimal selection scores on the General Aptitude Test Battery, the instrument employed as a screening and selection device for vocational training. As a group, these workers displayed sub-minimal mental ability as measured by the General Aptitude Test Battery. Since results of this selection device indicated that this group of hard-core unemployed workers would be unable to profit from vocational training, an avenue to gainful employment through the acquisition of useful and marketable occupational skills seemed closed. Without specialized skills and apparently without the requisite aptitude which the acquisition of specialized skills demands, these hard-core unemployed workers seemed unable to elevate themselves up and out of economic dependency. In a highly industrialized society where specialized skills are prized in the labor market and the lack of specialized skills spells economic and psychological dependence upon the public largesse, these workers were "superfluous people."

However, the relationship between the hard-core unemployed worker's presently inventoried vocational aptitudes and his previous educational development becomes a dimension of interest in view of the nature of the General Aptitude Test Battery. This instrument measures "developed" rather than "pure" or "native" aptitudes, in much the same fashion as a scholastic aptitude instrument measures the ability to profit from instruction at succeeding grade levels rather than pristine mental ability. The high school student who has never completed Algebra 1 is not "ready" to profit from instruction in Algebra 2, no matter by how many standard deviation units his inventoried "native" learning ability exceeds the mean.

Satisfactory performance on the General Aptitude Test Battery is predicated upon adequately developed levels of basic educational skill, primarily communication and arithmetic skills. To qualify for entry into vocational training under the auspices of MDTA by earning minimally qualifying scores in the GATB and its various subtests, it is necessary that the unemployed worker seeking training demonstrate that he has mastered basic educational skills at a level of proficiency not far deviant from the mean for the American population. Workers whose educational history has been markedly deficient are rarely able to qualify for vocational training under MDTA. Even mental ability as measured by the GATB represents a developed rather than native capacity; hence, it is possible that workers whose scores seem to indicate sub-minimal mental ability are similarly handicapped by deficiencies in educational development.

These considerations prompted application by the Division of Adult and Vocational Education of the South Bend Community School Corporation for a Federal grant to inaugurate a pilot training program designed to prepare hard-core unemployed workers to profit from MDTA-sponsored vocational training by improving basic educational skills.

Specifically, the South Bend Project on the Educational Rehabilitation of the Hard-Core Unemployed and its coordinate Research Project were designed to accomplish the following purposes:

1. Provide training in basic educational skills, especially language or communication and arithmetic skills, for 100 hard-core unemployed

workers and to assist them in the development of favorable work attitudes in order to equip them for subsequent vocational training and for re-entry into the labor force.

2. Determine the educational and vocational characteristics of the group of hard-core unemployed workers engaged in rehabilitative educational training.
3. As an ancillary goal, explore instructional techniques and curricular provisions adequate to the task of educational rehabilitation.

Operationally, the South Bend Project on the Educational Rehabilitation of the Hard-Core Unemployed (designated locally Project Edrehab) was authorized to provide a maximum of thirty-six consecutive weeks of rehabilitative educational training for a group of up to one hundred hard-core unemployed workers. Following rehabilitative educational training, enrollees who demonstrated the capacity to profit from vocational training, via their post-educational training performance on the General Aptitude Test Battery, were eligible to enroll in such MDTA-sponsored programs as they were qualified to enter.

In implementing Project Edrehab, enrollees were retested on the GATB and other instruments after twenty and thirty-six weeks respectively and subsequently entered vocational training. Project Edrehab's progress has previously been reported to the Office of Manpower, Automation, and Training (Pallone, 1964, 1964a).

Project Edrehab's coordinate research effort sought to determine whether a majority of the hard-core unemployed ineligible for vocational training were mentally or educationally retarded, whether a maximum of thirty-six weeks of rehabilitative educational training represented a period adequate to compensate satisfactorily for embedded learning deficiencies, and to describe selected educational and vocational characteristics of rehabilitative educational trainees. Worker characteristics have earlier been described in detail in a special report to OMAT (Jurkowski and Pallone, 1965).

The present report is a final summary of the research effort coord-

inated with Project Edrehab. While summarizing the implementation of Project Edrehab and reporting briefly the characteristics of trainees, this report focusses principally on learning outcomes, curricular experiences, and attitudinal reorientation among Edrehab trainees. It was the confluence of these elements which transformed a group of educationally retarded hard-core unemployed workers, "trapped" in obsolete or obsolescent sectors of the labor force, economically and psychologically dependent upon the public largesse, into prospectively productive citizens who were no longer superfluous people.

two EDUCATIONAL AND VOCATIONAL CHARACTERISTICS: STARTING POINT

THIS SECTION CONSIDERS briefly selected educational, vocational, and social characteristics of the group of hard-core unemployed workers who participated in Project Edrehab. These characteristics represent the starting points from which curricular experiences were devised.

Specifically, this section summarizes such characteristics as the enrollee's place of birth and pattern of residential mobility; years of formal education, reasons for its termination, and present level of educational functioning; military service, work history, job change, and patterns of employment and unemployment; physical disabilities; organizational memberships; and levels of mental ability and vocational aptitude.

ASSESSMENT PROCEDURES

Instruments employed to determine worker characteristics included the General Aptitude Test Battery, the Stanford Achievement Tests, the California Short-Form Test of Mental Maturity, the Revised Beta Examination, the Ammons-Ammons Quick Test, and a structured interview based on a questionnaire constructed for this project.

General Aptitude Test Battery scores were employed to measure the variables designated Learning Ability (G), Verbal Ability (V), Numerical Aptitude (N), Spatial Aptitude (S), Form Perception (P), Clerical Perception (Q), Motor Coordination (K), Finger Dexterity (F), and Manual Dexterity (F). The GATB was administered to potential rehabilitative trainees prior to enrollment in Project Edrehab by personnel of the South Bend office of the Indiana State Employment Service; subsequently it was administered

by ISES personnel after Edrehab enrollees had completed respectively twenty and thirty-six weeks of educational training. Initial GATB scores constituted operational measures of certain worker characteristics; subsequent scores are presented later in this report as measures of learning outcomes. Scores on this instrument as reported in this study are scaled according to USDL norms.

Stanford Achievement Test scores were employed to measure variables associated with educational achievement or educational functioning. Intermediate Form JM was administered to potential trainees prior to enrollment by psychometrists of the Office of Psychological Services, South Bend Community School Corporation; subsequently parallel forms were administered after twenty and thirty-six weeks of training respectively by staff members of Project Edrehab. Each administration yielded scores relative to paragraph meaning, word meaning, spelling, language development, arithmetic reasoning, and arithmetic computation. Raw scores on this instrument were converted through standard tables into measures of educational age for each variable, i.e., years and months of schooling in terms of grade placement. Initial scores measured worker characteristics, while subsequent scores measured learning outcomes.

California Short-Form Test of Mental Maturity scores were employed to measure learning ability or general intelligence. This instrument, commonly encountered in educational and personnel testing, is a group-administered, verbally-oriented measure of primarily academic intelligence. The CTMM was administered initially by Psychological Services psychometrists; parallel forms were administered after twenty and thirty-six weeks by Edrehab staff members. CTMM scores are reported in terms of inventoried intelligence quotients.

Revised Beta Examination scores were employed as a second measure of learning ability or general intelligence. This instrument, a revision of the familiar U.S. Army Beta test, is a group-administered, non-verbally-oriented measure of primarily functional intelligence. The Beta was administered initially by Psychological Services psychometrists and subsequently after twenty and thirty-six weeks by Edrehab staff members in parallel forms. Beta scores are reported in terms of inventoried intelligence quotients.

Ammons-Ammons Quick Test scores were employed as a third measure of learning ability or general intelligence. This instrument is a clinically administered, relatively "culture free" measure which correlates well with both academic and functional intelligence. The QT was initially administered with-

in the first week of training and after twenty weeks by a clinically-qualified member of the Edrehab staff. QT scores are reported in terms of inventoried intelligence quotients.

Educational-Vocational History variables were determined through structured interviews between a clinically-qualified Edrehab staff member and each trainee according to an interview schedule developed for use in this project. Enrollees or prospective enrollees, either during the first weeks of training or prior to entry, were asked to indicate their sex, race, chronological age, place of birth, pattern of residential mobility, educational and vocational history, physical disabilities, vocational aspirations and expectations, and organizational affiliations. The interview schedule has been reported elsewhere (Jurkowski and Pallone, 1965, pp. 81-83).

IDENTIFICATION OF POTENTIAL ENROLLEES

Responsibility for identifying potential enrollees in Project Edrehab rested with the South Bend office of the Indiana State Employment Service. A potential enrollee was defined as a worker who (1) had been a member of the labor force for three years or longer, (2) had been unemployed for a period of at least twenty-six weeks immediately preceeding enrollment, and (3) whose obtained scores on the GATB rendered him ineligible for enrollment in vocational training programs. As reported earlier (Pallone, 1964, p. 8), identification of potential enrollees was delayed considerably by a vastly increased client load in the South Bend office of ISES generated by the termination in December 1963 of automotive production by the Studebaker Corporation, a principal South Bend employer.

Following this procedure of initial screening by ISES personnel, potential enrollees were referred to Project Edrehab for educational and mental ability testing, during which the Stanford Achievement Test Battery, the California Short-Form Test of Mental Maturity, and the Revised Beta Examination were administered. Although instruction in Project Edrehab began with a core of 32 trainees on February 10, 1964, full strength was not reached until March 12. Between December 31, 1963, and March 9, 1964, a total of 261 potential enrollees was referred by ISES for educational and mental ability testing. However, of this number approximately twenty percent failed to complete the battery of Edrehab-administered tests, even after repeated follow-up contacts. Another twenty percent, it was determined, had been referred by

ISES on the basis of non-current or otherwise inaccurate GATB information. When these workers were retested on the GATB, they were found to be eligible for MDTA vocational training programs and were appropriately referred. Hence usable data on workers eligible for enrollment in Edrehab on the basis of hard-core unemployment and ineligibility for direct entry into vocational training was limited to some 172 cases.

To effect enrollment in Project Edrehab of workers both in need of training in basic educational achievement skills and capable of profiting from such training, it was necessary to devise a measure of each prospective enrollee's level of educational retardation or saturation. Workers whose educational achievement fell below their mental capacities were regarded as educationally non-saturated, or retarded, while workers whose educational achievement matched or surpassed their mental capacities were regarded as educationally saturated.

In order to operationalize the construct "educational retardation," a measure designated the Index of Educational Retardation was developed. The index is computed in the following manner:

1. A worker's scores, in terms of grade placement (grade and month) are summed for each of the five content areas measured by the Stanford Achievement Test Battery (i.e., paragraph meaning, word meaning, spelling, arithmetic reasoning, and arithmetic computation).
2. The resulting sum is averaged over the five tests to produce a single measure of "average grade placement."
3. The resulting average grade placement is converted, through reference to standard tables supplied in the manuals accompanying the Stanford tests, into the chronological age, in months, typically associated with placement in a certain grade and month. Thus, a worker whose score demonstrated an average grade placement of 2.4 (i.e., equivalent to the fourth month of the second grade) was regarded as demonstrating an "educational age" of 7 years and five months, or 89 months, the chronological age typically associated with a grade placement of 2.4.

4. The worker's performance, expressed and inventoried as an intelligence quotient, on the California Test of Mental Maturity is converted into "mental age" in months through reference to standard tables accompanying the CTMM. Since the commonly accepted formula holds that the intelligence quotient is a function of mental age divided by chronological age, this procedure is tantamount to a reversal of the formula in order to recover mental age.
5. The worker's mental age thus derived and expressed in months is subtracted algebraically from his educational age expressed in months to produce the index of educational retardation. The absolute value of the remainder, without regard to algebraic sign, indicates the discrepancy in months between mental age and educational age. The algebraic sign accompanying the absolute discrepancy indicates the direction of retardation or saturation: a positive sign indicates that educational age is greater than mental age and thus that the worker has reached a point of educational saturation, while a negative sign indicates that mental age is greater than educational age and thus that the worker is educationally retarded.

Indices of educational retardation were computed according to these procedures for each of 172 prospective enrollees on whom even incomplete test data were available. In some cases, prospective enrollees reported both educational and functional illiteracy in the absolute sense; such reports were regarded as prime facie evidence of educational retardation and decisions to admit such enrollees were based on evidence from Beta scores.

Of the 172 workers for whom indices of educational retardation could be computed, fully 160 were found to exhibit educational retardation, that is, discrepancies between mental age as measured by the CTMM and educational age as measured by the Stanford favored mental age. Thus the first question posed for this research project—are a majority of the hard-core unemployed educationally or mentally retarded?—may be answered.

However, it is a capital point to note that mental age was derived from CTMM performance in computing indices of educational retardation, since vast differences in performance obtain between CTMM on the one hand and Beta and QT scores on the other, as will be shown later. Had the

indices of educational retardation been established according to mental ability as measured by the Beta or QT, sharper, more dramatic, and very likely more valid discrepancies would have emerged.

One hundred and eight hard-core unemployed workers accepted the invitation to participate in Project Edrehab from among the 160 determined to be eligible for enrollment. During the first weeks of instruction, fourteen enrollees terminated for good cause, generally because they had been able to locate fulltime employment, much of it seasonal, through private sources. Complete psychometric data is not available for these enrollees, although they are included in reports of variables for which data on them is available.

THE GENERAL PICTURE

Since the educational and vocational histories of Project Edrehab enrollees have been described in statistical detail in a special report to the Office of Manpower, Automation, and Training (Jurkowski and Pallone, 1965, pp. 29-67), only brief prose descriptions are included in the present report.

Twenty-eight Project Edrehab enrollees were male Negroes, 24 female Negroes, 31 male Caucasians, and three were female Caucasians. No other races were represented. Of this group, seven male Negroes, six female Negroes, twelve male Caucasians, and two female Caucasians terminated with good cause between the implementation of the Project and the completion of the first twenty weeks of training. During the same period, three male Negroes, one female Negro, and one male Caucasian terminated for not good cause. Between the twentieth and thirty-sixth weeks of instruction, four male Negroes, four female Negroes, two male Caucasians, and the remaining female Caucasian terminated for good cause, while during this period no enrollees terminated for not good cause. Entry into fulltime employment was most commonly the underlying reason for termination with cause.

Of the Edrehab enrollees who completed rehabilitative educational training, nine male Negroes, seven female Negroes, and eight male Caucasians had achieved sufficient levels of educational achievement to allow entry into vocational training after twenty weeks of instruction, while twelve male Negroes, nine female Negroes, and eight male Caucasians achieved similar levels after thirty-six weeks of instruction. Learning outcomes are reported in detail in the fourth section of this report.

THE HARD-CORE UNEMPLOYED: A SKETCH

Thirty-eight percent of the hard-core unemployed workers enrolled in Project Edrehab were male Caucasians, forty percent were male Negroes, and twenty-two percent were female Negroes. Although three female Caucasians were among the Project's initial group of students during the first weeks of instruction, two of them terminated for good cause within six weeks; since the remaining member of this group also terminated for good cause between the twentieth and thirty-sixth week, she has not been included in the computation of descriptive statistics. The first description of educational and vocational characteristics is concerned with the "typical" Project Edrehab enrollee, without regard to sex or race. Differential descriptions are offered later.

The "typical" Edrehab trainee is 41.9 years old, although ages range from 20 to 64 years. He has lived in the South Bend area. 23.3 years, or since he was 19.6 years old, has changed his place of residence 1.6 times in the last five years, 2.6 times in the last ten years, and 8.0 times in his lifetime. On the average, he has completed 7.9 years of formal schooling, although one enrollee completed high school and another had no formal schooling whatever. Forty-eight percent terminated their formal education in order to help support their families of origin, while sixteen percent saw no reason to continue, and fifteen percent terminated in order to support themselves.

Edrehab's typical trainee has been in the labor force full-time for 25.6 years, or since he was approximately 16 years old. Forty-three percent of the trainees were born in the south central United States and forty-one percent in the north central United States. The pattern which begins to emerge is that of early school leaving, often to seek financial resources for the family or for oneself, followed by three years of full-time work experience prior to migrating to north central Indiana, very likely in search of economic security.

Almost one of every five days Edrehab's typical trainee has been in the labor force has been spent in unemployment. He has been employed 20.6 years but unemployed 5.0 years of the 25.6 years he has spent in the labor force. He has held a total of 8.2 different jobs (in the technical sense, as opposed to positions) during his vocational lifetime, and the preponderance of these have fallen into the lower-lower and upper-lower socioeconomic levels as measured by the Hamburger Occupational Rating Scale. Since he

has spent some twenty-one years of employment in slightly over eight different jobs, Edrehab's typical trainee has apparently changed jobs approximately once every two and one-half years. Since these jobs changes were either horizontal within a single socioeconomic class or vertical between the two lowest socioeconomic classes, economic entrapment in job families and clusters offering little or no employment, financial, or psychosocial security emerges. A relationship is evident between early school leaving, frequent horizontal job change, frequent periods of unemployment and dependence upon the public largess, and economic entrapment.

Although fifty-four percent of all Edrehab trainees reported one or more disabilities, they typically did not regard physical disability as contributory to unsettled occupational patterns. The preponderance of physical disabilities reported were visual in nature and typically had been corrected optically. However, three subjects each reported loss of at least one digit or chronic coronary ailments.

Some information about the social life of the Edrehab trainee can be inferred from his pattern of organizational memberships. While forty-three percent of the trainees reported memberships in no organizations, twenty-five percent belong to labor unions, thirteen percent to political organizations, eleven percent to religious organizations, nine percent each to non-religious fraternal and veteran's organizations, and eight percent to social service clubs. Labor and political groups predominate perhaps because they are regarded as having greater utilitarian value within the life space of the individual trainee.

Sixty-two percent of Edrehab enrollees reported they aspired or preferred to be trained for jobs in the lower-middle socioeconomic class as measured by the Hamburger scale, twenty-eight percent for jobs in the upper-lower class, eight percent for jobs in the middle-middle class, and one percent each for jobs in the upper-middle and lower-lower classes. No enrollee aspired to the lower-upper or upper-upper class. However, when the enrollees were asked to identify the job they expect to obtain after they had completed vocational training, fully fifty-one percent expected to return to the upper-lower class and three percent to the lower-lower class, and only forty-seven percent expected to obtain a job in the lower-middle class. No enrollee expressed the expectation of a job in the middle-middle or higher classes. Fully ~~sixty-eight~~ percent of Edrehab trainees expressed no discrepancy between job

aspiration and expectation, while twenty-eight percent demonstrated a discrepancy of a single class, and only four percent demonstrated a discrepancy as large as two classes. In other words, Edrehab trainees typically expected to be trained for and to re-enter the labor force frozen at the same socioeconomic level at which they had been working. Whether this situation suggests realism of vocational planning or the absence of hope is largely a matter of conjecture.

The typical Edrehab trainee's initial scores on the Stanford Achievement Test Battery revealed an ability to comprehend the meaning of paragraphs equivalent to that of a child who has completed 3.1 years of formal schooling; to comprehend the meaning of words equivalent to that of a child who has completed 3.8 years of schooling; to solve arithmetic reasoning problems equivalent to that of a child who has completed 4.4 years of schooling; to solve arithmetic computation problems equivalent to that of a child who has completed 4.0 years of schooling; to use the English language correctly equivalent to that of a child who has completed 2.7 years of schooling; and to spell correctly equivalent to that of a child who has completed 3.9 years of schooling. His educational age is equivalent to that of a child who has completed 3.6 years of formal schooling, although he has completed, on the average, 7.9 years in his own educational history.

When his learning ability, or general intelligence, is inventoried on the California Test of Mental Maturity, the typical Edrehab enrollee earns an intelligence quotient, on the average, of 56, generally regarded as mentally defective. However, his intelligence quotient on the Beta, a non-verbal (and hence less dependent upon past educational achievement) test, is 87, which is borderline or dull normal. On the Ammons-Ammons Quick Test, his intelligence, on the average, is 89. But the G score on the General Aptitude Test Battery also records an intelligence quotient in the defective range, 64.

These sharp differences—between intelligence quotients in the defective range when measured by the CTMM or GATB, both verbally-loaded instruments which rely heavily upon past educational achievement, and intelligence quotients on the threshold of the normal population when measured by the Beta or the QT, one a non-verbal and the other a clinical instrument which make a closer approximation to the measurement of native or pure ability—dramatizes vividly a major problem for the educationally retarded hard-core unemployed worker. The extent to which either the CTMM or the GATB is a valid measure for subjects with poor educational achievement is open to serious doubt. It seems justifiable to regard

both the CTMM and the GATB as inappropriate instruments to measure the learning ability of educationally retarded workers. According to Labor Department policy, the G score of the GATB is a limiting factor in employability, placement, and entry into vocational training. Hence, the educationally retarded hard-core unemployed worker is maintained in a position of economic and psychosocial dependence and instability on the basis of decisions made about him which rest upon the application of an inappropriate measure of learning ability. The very close similarity of scores earned by enrollees on the Beta and the QT serve to concurrently validate these measures. Since there is no statistically significant difference between the Beta and QT in the measurement of intelligence for these subjects, it is probably not justifiable to expend the time and effort required for the clinical administration of the QT. But it is equally evident that there is little or no justification for maintaining the GATB-G score as a limiting factor in the occupational planning and vocational training of hard-core unemployed workers.

Relative to vocational aptitudes measured by the GATB, where 100 is the mean for the national population, the typical Edrehab trainee obtains a mean score of 70 in verbal aptitude, 57 in numerical aptitude, 69 in spatial aptitude, 55 in form perception, 70 in clerical perception, 62 in motor coordination, 71 in finger dexterity, 82 in manual dexterity, and, as previously mentioned, 64 in learning ability. These average scores are, in most cases, at least a full standard deviation unit below the mean; they are considerably below selection scores for vocational training for any occupation in a competitive, industrialized society. But it seems evident that this pattern of vocational aptitudes, upon which entry into a vocational training program depends, is related totally to the enrollee's pattern of educational development.

THE MALE CAUCASIAN

The typical male Caucasian trainee enrolled in Project Edrehab is 45.1 years old, although ages range from 20 to 59 years. He has lived in the South Bend area 33.8 years, or since he was approximately twelve years old, has changed his place of residence 1.8 times in the last five years, 2.5 times in the last ten years, and 7.0 times in his lifetime. On the average, he has completed 7.5 years of formal schooling, although one male Caucasian enrollee completed high school and all male Cau-

casian enrollees had completed the third grade. Thirty-eight percent terminated their formal education in order to help support their parental families, twenty-four percent each to support themselves or because they saw no reason to continue, and three percent because they were asked to withdraw by school authorities. In comparison with the group as a whole, he is somewhat older, has lived a dozen years longer in the South Bend area, came to the area in late childhood or early adolescence and very likely had some of his education in the South Bend schools.

The male Caucasian enrollee has spent 29.2 years full-time in the labor force, entering the labor force when he was approximately 16 years old. In contrast with the total group, eighty-three percent of these enrollees were born in the north central United States and forty-one percent in South Bend itself. Apparently residential mobility for these enrollees has been primarily lateral change, since male Caucasians demonstrate less geographic mobility than the total group of enrollees. The male Caucasian rehabilitative educational trainee has been employed for 24.0 years and unemployed for 5.1 years of his total 29.2 years in the labor force, or for approximately eighty-three and seventeen percent respectively. Although he has experienced unemployment less often than the group as a whole, he has held 7.9 jobs, primarily in the upper-lower socioeconomic class. The pattern of horizontal occupational change every three years is similar to that of the group of enrollees as a whole.

Seventy-three percent of male Caucasian Edrehab trainees report one or more disabilities, usually visual, and typically optically corrected. However, ten male Caucasian trainees report mild auditory difficulties, of which about half are severe enough to require auditory amplification.

The male Caucasian trainee is more active socially than is the group as a whole. Thirty-eight percent of these trainees belong to a labor union, twenty-one percent to veterans' organizations, seventeen percent to non-religious fraternal groups, ten percent to political organizations, and seven percent each to social service and religious groups.

Although the typical male Caucasian was 21 years old at the outbreak of World War II, fifty-nine percent did not serve in the Armed Forces. Of the forty-one percent who served, eighty-eight percent were discharged with the rank of private first class or lower. Yet a high percentage belongs to veterans'

groups. Only twelve percent of the male Caucasians who served in the Armed Forces had attained a rank as high as corporal by the time of their discharge.

Forty-eight percent of the male Caucasian enrollees reported that they aspired to be trained for jobs in the lower-middle socioeconomic class, twenty-eight percent for jobs in the upper-lower class, seventeen percent for jobs in the middle-middle class, and three percent for jobs in the lower-lower class. However, none expected to obtain jobs above the lower-middle class. Forty-eight percent expected to obtain jobs in that class after completing vocational training, forty-five percent expected jobs in the upper-lower class, and seven percent in the lower-lower class. Sixty-two percent expressed no discrepancy between job aspiration and expectation, twenty-eight percent expressed a one-class and ten percent a two-class discrepancy.

Project Edrehab's male Caucasian enrollees displayed, on the average, an ability to comprehend the meaning of paragraphs equivalent to that of a child who has completed 3.2 years of schooling; to comprehend the meaning of words equivalent to that of a child who has completed 3.7 years of formal schooling; to solve arithmetic problems equivalent to that of a child who has completed 4.4 years of schooling; to solve arithmetic computation problems equivalent to that of a child who has completed 2.7 years of schooling; to use the English language correctly equivalent to that of a child who has completed 2.7 years of schooling; and to spell correctly equivalent to that of a child who has completed 4.1 years of formal schooling. Their mean educational age is equivalent to that of a child who has completed 3.7 years of formal schooling, although these enrollees have completed, on the average, 7.5 years of formal education in their own educational history.

Male Caucasian enrollees display a mean intelligence quotient of 60 on the CTMM, 94 on the Beta, 93 on the QT, and 68 on the GATB-G. Their mean scores on the GATB in vocational aptitude are 72 in verbal, 59 in numerical, 77 in spatial, 61 in form perception, 72 in clerical perception, 62 in motor coordination, 65 in finger dexterity, and 81 in manual dexterity.

Although the male Caucasian enrollee demonstrates no appreciable differences in educational achievement from levels exhibited by the group as a whole, he demonstrates a somewhat higher IQ on all measures, and his performances on the GATB are somewhat higher than those of the total group in all tests except finger and manual dexterity.

THE MALE NEGRO

The typical male Negro trained enrolled in Project Edrehab is 44.5 years old, although ages range from 20 to 64 years. He has lived in the South Bend area 19.2 years, or since he was approximately 24 years old, has changed his place of residence 1.2 times in the last five years, 2.1 times in the last ten years, and 7.7 times in his lifetime. On the average, he has completed a mean 7.6 years of formal education; one male Negro had no formal education and none progressed beyond the tenth grade. Fully seventy percent reported they had terminated their education in order to help support their parental families, while fifteen percent saw no reason to continue, and only three percent left school to support themselves. In terms of comparison to the total group of enrollees, the male Negro trainee is reported somewhat older, has lived in the South Bend vicinity a shorter time, but he also came to the area long after his formal schooling had ended and when his initial occupational pattern was probably well established, and has not changed his period of residence as often in the past ten years. In comparison to the group of male Caucasians, he is the same approximate age, came to the area when he was almost twice as old, has lived in the South Bend area only half as long, and has moved less often in the last ten years but more often in his lifetime.

The male Negro enrollee has completed three months less of formal schooling than the group as a whole but one month more than male Caucasians. The most common cause of early school leaving reported by the male Negro enrollee is identical to that reported most frequently by the group as a whole and in contrast to the variety of causes reported by male Caucasians. At the outbreak of the second War, the typical male Negro enrolled in Edrehab was twenty years old, but only thirty percent served in the Armed Forces. However, of the thirty percent who served nearly two-thirds had achieved the rank of corporal or higher by the time of discharge. The remaining third were discharged at the rank of private first class, and none were discharged below that rank. In contrast, only about twelve percent of the Caucasian males in this sample who served in the Armed Forces had achieved the rank of private first class or above by the time of discharge. Apparently the male Negro was able to take greater advantage of opportunities presented for advancement by the Armed Forces than was the male

Caucasian, though both were equally hampered by lack of formal education. Although this information was not gathered in this study, it is likely that the male Project Edrehab trainees who were eligible for armed service in the second War but who did not serve (fifty-nine percent of the male Caucasians and seventy percent of the male Negroes) were rejected for educational or mental retardation.

Project Edrehab's typical male Negro trainee has been in the labor force for 28.7 years, entering the labor force at age 16, the typical age of entry for the group as a whole and for the group of male Caucasians. He has been employed for 22.4 of those years and unemployed for 6.3 years, or for nearly one day of every four he has spent in the labor force. He has experienced unemployment somewhat more frequently than either male Caucasians or the total group.

Sharp contrasts are evident in the male Negro enrollee's pattern of job change. He has held on the average 14.5 different jobs during his working career of 22.4 years, suggesting job change approximately every eighteen months of his working life. Both the total group and male Caucasian experienced job change only once every three years; the male Negro apparently found it necessary to seek a new job twice as often. To interpret the impact of this situation accurately, it is necessary to recall that job change is here used in the technical sense of change from one set of related duties to another set of duties unrelated to the first. Position change within a single job (e.g., from one place of employment to another while maintaining similar duties) was unfortunately not investigated in the present project. The overwhelming preponderance of jobs held by male Negro enrollees fall into the lower- and upper-lower socioeconomic classes; only about twelve percent of all jobs held by male Negro enrollees fall above the upper-lower class.

The male Negro enrolled in Project Edrehab appears to be more mobile geographically as well as occupationally than either the total group of enrollees or male Caucasians. Fully seventy percent of the male Negro enrollees were born in the south central United States, primarily in Arkansas, Tennessee, and Missouri; only sixteen percent were born in South Bend itself. Fifty-four percent of the male Negro enrollees display one or more physical disabilities, a figure identical to that of the group as a whole and in contrast to the figure of seventy-one percent of male Caucasians. Visual disability,

typically corrected optically, predominates.

Socially, the male Negro enrollee is less active than the total group of enrollees and very much less active than his Caucasian counterpart. No organizational membership is reported by fully forty-eight percent of the male Negro trainees, in contrast to twenty-eight percent of the male Caucasian enrollees. Male Negro enrollees who report organizational memberships belong to labor unions (twenty-seven percent), political groups (fifteen percent), and fraternal religious groups (twelve percent).

The absence of hope emerges very clearly in the vocational aspirations and expectation of the male Negro trainee. Seventy-three percent prefer to be trained for jobs in the lower-middle socioeconomic class, and twenty-seven percent for jobs in the upper-lower class. No male Negro subject aspires to a job higher than the lower-middle class. In view of his occupational history, marked by very frequent horizontal job change, his aspirations reflect realistic limitations which he has experienced in the past.

Although seventy-three percent of male Negro enrollees prefer jobs in the lower-middle class, only fifty-eight percent expect to obtain jobs in that class or higher; similarly, while twenty-seven percent prefer jobs in the upper-lower class, forty-two percent expect jobs in that class. For fully eighty-five percent of the male Negro trainees there is no discrepancy between occupational aspiration and expectation, and for the remaining fifteen percent the discrepancy is limited to the width of one socioeconomic class. In contrast, nine percent of the total group and twenty percent of the male Caucasian group at least aspires to jobs in the middle-middle or higher classes.

Male Negroes enrolled in Project Earehab displayed, on the average, an ability to comprehend the meaning of paragraphs equivalent to that of a child who has completed 2.6 years of formal schooling (in contrast to 3.1 for the total group and 3.2 for male Caucasians); to comprehend the meaning of words equivalent to that of a child who has completed 3.2 years of schooling (in contrast to 3.8 and 3.7 respectively); to comprehend and solve arithmetic reasoning problems equivalent to that of a child who has completed 4.1 years of schooling (in contrast to 4.4 and 4.4 respectively); to solve arithmetic computation problems equivalent to that of a child who

has completed 3.6 years of formal schooling (in contrast to 4.0 and 4.1 years, respectively); to use the English language correctly equivalent to that of a child who has completed 1.9 years of schooling (in contrast to 2.7 and 2.7 respectively); and to spell correctly equivalent to that of a child who has completed 3.2 years of schooling (in contrast to 3.9 and 4.1 respectively). On the average, his educational achievement is approximately five to six months below that of both the whole group and male Caucasians, even though he has completed approximately the same number of years of formal schooling in his own educational history. Since the majority (seventy percent) of male Negroes in this study were born in the south central States, this situation perhaps implies impoverished school facilities available to him during his educational development. His educational age is 3.1.

Project Edrehab's male Negro enrollees demonstrate a mean intelligence quotient of 88 on the QT (in contrast to 89 for the total group and 93 for his Caucasian counterpart), 84 on the Beta (in contrast to 87 and 94 respectively), 51 on the California (in contrast to 56 and 60 respectively), and 60 on the GATB-G (in contrast to 64 and 68). The mean scores for the group of male Negroes in vocational aptitudes are 68 in verbal (in contrast to 70 and 72), 53 in numerical (in contrast to 57 and 59), 64 in spatial (in contrast to 69 and 77), 45 in form perception (in contrast to 55 and 61), 66 in clerical perception (in contrast to 70 and 72), 60 in motor coordination (in contrast to 62 and 62), 63 in finger dexterity (in contrast to 71 and 65), and 73 in manual dexterity (in contrast to 82 and 81). Not only in educational achievement but also in mental ability measures and vocational aptitudes the male Negro tends to perform slightly less well than the group of Edrehab trainees as a whole or his Caucasian counterparts enrolled in Edrehab.

THE FEMALE NEGRO

The typical female Negro enrolled in Project Edrehab emerges as very different from both Caucasian and Negro males in educational and vocational characteristics. She is only 31.6 years old (in contrast to average ages of 45.1 and 44.5 for male Caucasians and male Negroes respectively), and the age range is limited to from twenty to fifty-four years, with only six percent above 44 years. She has lived in the South Bend area only 13.5 years (in contrast to 33.8 and 19.2 years), or since she was approximately 22 years old (in contrast to 13 and 25 respectively). She has changed her place of residence 1.9 times (in contrast to 1.8 and 1.2) in the last five years, 3.7 (in contrast to 2.5 and 2.1) in the last ten years, and 10.2 times (in contrast to 7.0 and 7.7) in her

lifetime. On the average, she has completed 9.1 years of formal schooling (in contrast to 7.5 and 7.6 respectively). No Negro female enrollee completed less than five years nor more than eleven years of formal education. Twenty-four percent of female Negro enrollees each left school to help support their families, to support themselves, or to marry. Six percent each left school because they saw no reason to continue or because they were invited to do so by school authorities.

In comparison to all trainees in Project Edrehab, the female Negro is considerably younger, has lived in the South Bend area only about half as long, is far more mobile residentially even though she is younger, and has completed more formal education. She is almost fourteen years younger than the typical male Caucasian, came to South Bend six years later, in early adulthood, has lived in South Bend only half as long, is more mobile residentially, and has completed an additional year and a half of formal schooling. She is thirteen years younger than the typical male Negro, came to South Bend seven years earlier, very likely before her occupational pattern had crystallized, and has lived in South Bend only two-thirds as long. She has been residentially more mobile and has also completed an additional eighteen months of schools more than the typical male Negro. Fewer female Negroes left school to support their families or because they saw no reason to continue than among either Caucasian or Negro males.

The female Negro enrollee has spent only 13.4 years full-time in the labor force (in contrast to 29.2 and 28.7), entering the labor force when she was about 18 years old. Fifty-three percent of the female Negro enrollees were born in the south central United States, twelve percent in the Gulf States, twenty-four percent in the north central States, and six percent each in the south Atlantic and Rocky Mountain States. None were born in the South Bend vicinity. Her age at first residence in South Bend suggests that she had no formal schooling in the area.

The Negro female educational rehabilitative trainee has been employed for 11.4 of her 13.4 years in the labor force and unemployed for 2.0 years, or for only about fifteen percent of the time, in contrast to twenty and twenty-five percent for male Caucasians and Negroes respectively. She has held only 3.9 different jobs, suggesting job change approximately every three years, far less often than the male Negro. Her jobs have been primarily in the upper-lower

class. Greater educational achievement seems to have equalized sex and race differences, for her pattern of occupational mobility approximates that of the male Caucasian. Horizontal job change again predominates.

Only eighteen percent of the female Negroes enrolled in Edrehab report a single physical disability and none report more than one disability. Of those who report a disability, one third each report visual, auditory, and neurological impairments, but none considers herself a physically disabled person.

Organizationally, the female Negro appears not to be a "joiner." Fully fifty-nine percent report no organizational memberships. Eighteen percent belong to fraternal religious groups, twelve percent each to non-religious fraternal organizations, political groups, and social service organizations, and six percent to recreational groups, but none claims membership in a labor union. The pattern of social activity and organizational membership appears to be primarily feminine interest- or maternal-oriented rather than utilitarian-oriented.

Even though she is younger and better educated than both male groups, the female Negro seems as void of hope as the male Negro. Sixty-five percent of the female Negroes enrolled in Edrehab aspired to be trained for jobs at the lower-middle socioeconomic class, twenty-nine percent in the upper-lower class, and six percent in the middle-middle class. Yet none expects to enter a job above the lower-middle level. Twenty-nine percent expect to enter jobs at the lower-middle level and seventy-one percent at the upper-lower level. For fifty-three percent of the female Negro trainees, however, there is a single class discrepancy between vocational aspiration and expectation; only for forty-seven percent (in contrast to sixty-two percent of male Caucasians and eighty-five percent of male Negroes) is there no discrepancy. But no female Negro exhibits a discrepancy between aspiration and expectation as large as two socioeconomic classes.

Educationally the female Negro has not only completed more years of formal schooling but demonstrates greater educational achievement than either Caucasian or Negro male enrollees. Her performance on the Stanford indicates an ability to comprehend the meaning of paragraphs equivalent to that of a child who has completed 3.9 years of formal schooling (in contrast to 3.2 and 2.6 years for male Caucasians and Negroes respectively); to comprehend

the meaning of words equivalent to that of a child who has completed 5.2 school years (in contrast to 3.7 and 3.2); to solve arithmetic reasoning problems equivalent to that of a child who has completed 4.9 (in contrast to 4.4 and 4.1) years; to solve arithmetic computation problems equivalent to that of a child who has completed 4.4 (in contrast to 4.1 and 3.6) years; to use the English language correctly equivalent to that of a child who has completed 3.9 (in contrast to 2.7 and 1.9) years; and to spell correctly equivalent to that of a child who has completed 5.0 (in contrast to 4.1 and 3.2) years of formal education.

Female Negro enrollees in Project Edrehab demonstrate a mean intelligence quotient of 85 (in contrast to 93 and 88) on the QT, 80 (in contrast to 94 and 84) on the Beta, 57 (in contrast to 60 and 51) on the California, and 65 (in contrast to 68 and 60) on the GATB-G. Her educational age is 4.6, in contrast to 3.7 for male Caucasians and 3.1 for male Negroes. Although she scores lower than males of either race on all intelligence measures except the California Test of Mental Maturity, the female Negro's mean educational age suggests that she has been able to capitalize on her learning ability to a far greater extent than males of either race. That her score on the CTMM typically surpasses that of males is perhaps significant, since this instrument measures what is primarily academic intelligence.

Edrehab Negro female enrollees' performance on the GATB tends to display vocational aptitudes generally superior to those of males of both races. Mean scores for female Negroes are 72 in verbal aptitude, in contrast to 72 for male Caucasians and 68 for male Negroes; 62 in numerical aptitude, in contrast to 59 and 53; 65 in spatial aptitude, in contrast to 77 and 64; 61 in form perception, in contrast to 61 and 45; 74 in clerical perception, in contrast to 72 and 66; 65 in motor coordination, in contrast to 62 and 60; 92 in finger dexterity, in contrast to 65 and 63; and 100, or at the national mean, in manual dexterity, in contrast to 81 and 73.

The Negro female is apparently more mobile residentially, geographically, and occupationally than males of either race. She is also younger and somewhat better educated; even though she appears to be no more intelligent, she seems to have made better use of her learning capacity. Caucasian and Negro females unfortunately cannot be compared on the characteristics explored in this study, since complete data is available on only one female Caucasian. Yet the Negro and Caucasian male enrollees seem to resemble each other more than either resembles the female Negro. In many important respects, the female Negro appears more similar to the male Caucasian than to the male Negro. Perhaps sex differences are far

more viable factors in the educational, social, psychological, and economic dynamics which underlie hard-core unemployment than are race differences. Similarities in the patterns of occupational change among male Caucasians and female Negroes are perhaps suggestive of variant role expectations in the social structure of the Caucasian and Negro family, which differentially assigns the role of bread-winner and authority figure to the senior male in the former case and to the senior female in the latter. Yet the reality of limitations imposed by racial differences emerges quite clearly in the similarity of vocational aspiration patterns of Negroes of both sexes. Perhaps what is most salient in the interpretation of these results is the issue of the self-role expectation of the members of each group.

COMMON ELEMENTS

A pattern basic to the educational and vocational characteristics of each of the three groups of enrollees in Project Edrehab emerges from the reported prose descriptions. Regardless of his sex and race, the educationally retarded hard-core unemployed worker tends to leave school early, before he has finished his elementary education; he is, in adulthood, markedly deficient in the common educational skills of communication and arithmetic which should have been acquired earlier in his educational development and which his level of formal education indicates he should have mastered.

Though he leaves school to enter the labor market, he apparently is economically entrapped by his educational deficiencies. He is stratified at lower occupational levels, without specialized skills or the means requisite to acquire specialized skills. Economic entrapment, rooted in educational deficiency or retardation, leads to frequent horizontal job changes in an industrialized, competitive society. A pattern of relatively continuous interruption of full-time work marked by frequent periods of unemployment tends to be crystallized.

But the worker so entrapped has the mental capacity to acquire specialized skills and ultimately to function at an occupational and personal level higher than that at which his "unskills" permit him to function. When he presents himself as a candidate for vocational training in the acquisition of skills, however, he faces such instruments as the General Aptitude Test Battery or the California Short-Form Test of Mental Maturity. His economic entrapment is reinforced through administration of such instruments by the very social institutions charged with rendering him no longer superfluous.

three CURRICULAR EXPERIENCES

AN ORGANIC CURRICULUM was designed to meet the specific needs of enrollees in Project Edrehab on the basis of an initial inventory of levels of educational achievement. Though Project Edrehab was to be concerned with a program of basic educational skills improvement, specific curricular provisions and instructional experiences were not determined a priori, but rather were devised organically after inventorying enrollee needs and strengths. Since curriculum design is as much a function of the interest and needs of designers as of students, this section sketches briefly the background of the instructional staff prior to describing curricular experiences.

INSTRUCTIONAL STAFF

In January 1964 five members were appointed to the staff of Project Edrehab. Dr. Nathaniel J. Pallone, coordinator of counselor education at the University of Notre Dame, assumed the position of research director and instructional coordinator on a consulting basis. Mrs. Ruth Bell, M.S.W., an experienced social caseworker who also held Indiana certification as a teacher of English, was initially appointed to devote half-time to instruction in basic communication skills and half-time to individual and group counseling, guidance, and social work practice focussing on problems of general personal adjustment relative to school and work situations. Mr. Henry W. Jurkowski, M.A., an experienced English and arithmetic teacher and guidance specialist whose previous experience had included service as a teacher-counselor in Mexican-American schools in the southwestern United States and in American schools in the Canal Zone, Republic of Panama, was appointed to serve as instructor in basic arithmetic and communication skills three-quarters time and to devote the remainder of his time to group and individual guidance and to research activities. In June 1964, Mrs. Bell also assumed general supervisory duties in connection with the Project. Mr. Jurkowski left the Project staff

in September 1964 in order to accept appointments to the staff of the Guidance and Testing Office at the University of Notre Dame and the Counseling Center, Jewish Vocational Service, Chicago.

Miss Una Camp, M.A., a teacher with more than a quarter-century experience in public and private education as a mathematics specialist, was appointed to the Project Edrehab staff to devote full-time to instruction in basic arithmetic skills and to coordination of the instructional program in arithmetic. A veteran of Peace Corps service in the Far East, Miss Anita Morse, B.A., who had recently completed special graduate training in the teaching of English to adults, was selected to devote full-time to instruction in basic communication skills. In June 1964, Miss Morse resigned from the Project staff to accept a scholarship in the Law School at Indiana University. In her place was appointed Mr. William Green, B.S., an experienced high school teacher who had served several years as a caseworker assigned to the juvenile court of St. Joseph's County, Indiana.

The Project Edrehab staff members who served as "curriculum designers" were Dr. Pallone, Mrs. Bell, Mr. Jurkowski, Miss Camp, and Miss Morse. In January and early February 1964, these Edrehab staff members assembled all available data on pre-entry testing of prospective enrollees in order to establish commensurate instructional goals, select instructional techniques and materials, and organize a meaningful program of curricular experiences. To provide acquaintance with the operational realities of educational programs similarly aimed at compensatory educational goals, staff members held conferences with the director, supervisors, and instructors of the Job Opportunities through Better Skills (JOBS) Project, sponsored by the Young Men's Christian Association of metropolitan Chicago in conjunction with other Chicago youth-serving agencies, and with the staff of the Near North Older Workers Project, sponsored by Jewish Vocational Services of Chicago.

Establishment of instructional goals involved the operationalization of the ultimate goal of the Project, viz., elevating the level of literacy and numerical ability among Project enrollees to the minimal points at which enrollees would be enable to profit from training in vocational skills and to re-enter the labor force in such fashion as to be able to maintain economic self-sufficiency. Operationally, a number of issues suggested themselves. Is the goal of minimal skills improvement acceptable or even realistic? Is not the nation served better if instructional efforts are directed toward max-

imal educational development within the realistic limitations imposed by the structure of Project Edrehab? What role is to be played by the guidance function in concert with the instructional function? What goals can realistically be set with regard to reorientation of enrollees' attitudes towards themselves and toward work? Is it realistic to expect a group of educationally retarded adults, for whom school had undoubtedly been a threatening experience, to be able to demonstrate adequate improvement in educational skills without first undergoing motivational examination and reorientation?

Selection of instructional techniques suited to basic educational training for educationally retarded adults in skills usually mastered during early elementary grades implied not only identification of appropriate teaching methods but also skills and techniques in social work, counseling, and guidance usable both by the two professionally trained staff counselors and by members of the instructional staff.

INSTRUCTIONAL MATERIALS

A major problem faced by Edrehab staff members centered about the investigation and evaluation of available instructional materials at least not grossly unsuitable for instruction of a group of educationally retarded adults deficient in skills commonly mastered early in the program of educational development at the elementary level for whom school was very likely a highly threatening experience against which certain defensive reactions had probably been erected. Succinctly, the problem is this: How does one teach the severely retarded reader or the non-reader to improve his skills when his level of educational achievement ranges between that typical of the second to fourth grade but whose experiential and interest levels have matured to adult status?

The majority of texts available are written not only at a skill level but at an interest and experiential level appropriate for the second to fourth grader. Yet adults will not respond readily, whatever their skill levels, to reading primers and texts which detail the activities of Dick, Jane, and Spot, nor to arithmetic problems which read: "When your mother sends you to the store with a dollar to buy two loaves of bread at twenty-seven cents a loaf, how much change should you bring back to her?" The educational achievement levels achieved by Project enrollees in relation to the extent of their formal education, as reported in the previous section, bears silent

testimony to the staff's initial conjecture that educationally retarded hard-core unemployed workers had experienced the school situations in their own educational histories as unpleasant and threatening. However, the willingness or desire of enrollees in Project Edrehab to return to a school setting in view of their previous unrewarding school experiences argues for a high degree of ego strength. Nonetheless, instructional materials which serve to emphasize the need for early elementary schooling by presenting situations appropriate to the interests of the second to fourth grader were regarded by the Edrehab staff as inducive of negative reactions to instructional efforts.

Edrehab staff members investigated and evaluated instructional materials supplied by most major and many minor educational publishers for language arts and arithmetic instruction with students whose level of educational achievement approximated that of pupils in early elementary grades. This set of materials largely addressed itself totally to the needs of pupils regarded as slow learners in the junior high school years. Topics covered in language arts materials, for example, concerned school and Boy Scout activities, school dances, and other areas of interest appropriate to junior high students but by and large inappropriate or even offensive to undereducated adults. Because of their potentially negative value as inviting rejection by Project enrollees, they were discarded.

Similarly, staff members investigated materials intended for use in Americanization classes for the foreign-born. This set of materials had the distinct advantage of an adult experiential level, even in the particular situations utilized in textual presentation. Peter, for example, is a middle-aged Italian immigrant who is settling with his family in an Italian enclave in New York City. Among other things, Peter discovers the contributions to American life made by previous Italian immigrants. Though these materials were written at an adult experiential and interest level, they were similarly foreign to the life space experiences and interests of Project Edrehab enrollees, all of whom were native Americans, many of whom were in-migrant from the southern half of the United States, many of whom were members of a minority race, and none of whom lived in the vast metropolitan areas of New York, Chicago, and Los Angeles in which authors of textbooks for Americanization classes for the foreign-born apparently believe all immigrants live. These materials were regretfully discarded.

After considerable searching, a decision was made by Project staff

members to adopt as the major vehicles in language arts instruction textual and workbook materials contained in the Rochester Occupational Reading Series, a set of multi-functional materials developed for use with severely retarded high school students who have been identified as potential drop-outs. Materials in this series are written at an adult experiential and interest level but at a skill level equivalent to that associated with the early elementary years. The focal point of the situations presented in these textual materials is the occupational choice and adjustment of the recent high-school drop out, who searches, often in vain, for a job, learns to conform to the demands and directives of employers, learns to budget his income, and the like. Even though the persons depicted in these situations are twenty to thirty years younger than the enrollees in Project Edrehab, they are involved in situations with which Edrehab enrollees can readily identify. Moreover, they face life problems which Edrehab enrollees currently face and which the children of many Edrehab enrollees currently face. In addition to the direct instructional benefits which accrue from the selection of textual and practice materials which invite ego-involvement on the part of the learner, selection of materials in the Rochester Occupational Reading Series, published by Science Research Associates of Chicago, served the additional purpose of providing stimuli for discussion in group guidance classes. Materials supportive of the Rochester series but directed toward specific aspects of language arts instruction—language usage, formal grammar, penmanship—were selected from among instructional devices written at an adult or at least adolescent interest level but which demanded early elementary skill levels initially. These included most notably the graded Reading Laboratories and Writing Laboratories supplied by Science Research Associates. Materials were secured which ranged from the second to fourth grade at the initial level of skill demanded for successful performance but which successively progressed until the learner achieved skill levels equivalent to those associated with typical tenth grade performance.

Unfortunately, Edrehab staff members were unable to locate similarly constructed textual materials for arithmetic instruction. Since remedial arithmetic in the high school and in adult education, no less than compensatory education for the undereducated adult, is a comparatively new endeavor, few text writers have yet addressed themselves to its specific needs and problems. What was needed for use in Project Edrehab was a set of materials inviting learner ego-involvement by presenting personally meaningful and life space-relevant situations which stimulate mathematical thinking by the learner. For example, instruction in the calculation of proportions, to be personally meaningful to undereducated adult women, might profitably focus upon the mathematical reasoning processes involved in adapting a

receipe intended to serve four persons to a situation in which seven are to be served. Similarly, ratios might problematically be presented in situations in which the task is to determine price-to-content weight ratios of differing brands of an identical product. For male Edrehab trainees, almost all of whom had worked at least briefly as custodians, similar situations involving the amount of wax necessary to the treatment of 480 square feet when one gallon covers 256 square feet were deemed appropriate.

// Since no such texts were available, Project Edrehab's arithmetic instruction coordinator was assigned the task of structuring original situations relevant to the life space of the learner. To provide motivation for learning basic arithmetic operations, as opposed to arithmetic reasoning processes applied to realistic life problems, Edrehab staff members decided to adopt programmed instructional materials of the operant conditioning variety for use with teaching machines. Materials published by the Grolier Society, based on a linear system of programming, for use with MinMax II individual teaching machines, were adopted. Programs were obtained for the basic arithmetic operations: addition, subtraction, multiplication, division of whole numbers, manipulation of fractions and decimals. It was decided that once Edrehab trainees had mastered the basic operations, an effort was to be made to introduce them to textual materials prepared for slow-learning high school students and for students of industrial education. In fact, a small but significant number of trainees had progressed well enough after twenty weeks of instruction to be introduced to algebra.

INSTRUCTIONAL CURRICULUM

Though Project Edrehab was funded to inaugurate an educational program for the improvement of basic educational skills for undereducated hard-core unemployed adults, no specific curriculum content was determined a priori. Though language or communication arts and arithmetic skills had been identified as the principal focal points for instructional effort, the relative importance and proportionate study time for each focal point was not predetermined.

From an evaluation of the performance of prospective enrollees on the Stanford Achievement Test battery, reported in the second section of this report, it became evident that educational retardation was more severe in the area of language arts than in arithmetic skills. Hence, Edrehab staff members determined to apportion the school day to reflect this relative emphasis. A principal limiting factor in the design of the instructional curriculum was the length

of the school day, predetermined at six and one-half hours, exclusive of time provided for lunch. Within this limitation and in view of the relative emphasis upon language arts instruction, Edrehab staff members allocated instructional time in the following proportions:

1. Language arts instruction, two and one-half hours daily, or approximately fifty-four percent of instructional time, including
 - a. Reading comprehension and composition instruction, two and one-half hours daily
 - b. Instruction in formal grammar and English usage, one-half hour daily
 - c. Instruction and practice in speech and penmanship, one-half hour daily
2. Arithmetic skills instruction, two hours daily, or approximately thirty-two percent of instructional time, including
 - a. Instruction in basic arithmetic operations and processes, one and one-half hour daily
 - b. Instruction and practice in arithmetic application, one half-hour daily
3. Group guidance activities, one hour daily, or approximately fourteen percent of instructional time, including
 - a. Group discussion on general problems of adjustment to the world of work, one half-hour daily
 - b. Group instruction and discussion of study skill methods and adjustment to the school situation, one half-hour daily

Since group guidance activities were conducted by staff members who also functioned as language arts instructors, these activities also provided useful vehicles in which to practice speech skills learned in language arts instruction. The general purpose of group guidance activities was to aid the implementation of the principal

instructional goals by assisting trainees to view themselves more realistically, to appraise educational and occupational demands in the world of work realistically, and to improve their motivation relative to educational skills improvement through recognition and acceptance of their educational limitations in relation to employability. In addition to group guidance activities designed into the instructional curriculum, individual counseling was available outside of class time on a formal basis with the research director and the two professionally trained counselors on the staff and on an informal basis from other staff members.

An innovation in group work practice introduced by Mrs. Ruth Bell appears to have proven most effective in assisting trainees to examine their attitudes and motivation. In order to help enrollees improve their speech patterns, Mrs. Bell tape-recorded group sessions focussing on general problems of adjustment and attitude orientation. It was Mrs. Bell's intention to play back these recordings during subsequent group sessions so that trainees would have the opportunity to examine their speech patterns and undertake corrective exercises. However, during playback sessions, this experience produced the unanticipated effect of helping trainees objectify and examine their attitudes as they were expressed in a concrete situation. The experience of hearing themselves express opinions and beliefs about the world of work caused trainees to re-evaluate their orientations. In turn, group sessions were more quickly focussed on attitude structure.

Edrehab instructional periods during morning hours were one hour in length, while instructional periods during afternoon hours were one-half hour in length. Four hour-long periods were provided each morning, five each afternoon. Each class alternated at the end of an instructional period, so that trainees, for example, who were instructed in language arts during the first and third morning periods were instructed in arithmetic skills during the second and fourth periods. In addition to class time, each enrollee was expected to devote two hours of out of class time to complete assignments. Most trainees remained in the school building for their assignment, partly because "homework" embarrassed them before spouses and children and partly because instructors were available at school to assist them.

Trainees enrolled in Project Edrehab were assigned to one of four homogeneous classroom groups on the basis of level of educational achievement in each achievement area tested on the Stanford Battery. Accordingly an enrollee's score in paragraph

meaning, word meaning, language usage, and spelling were employed to group trainees into classes in language arts skills. Scores in arithmetic reasoning and computation were used to group trainees into classes in basic arithmetic skills. Insofar as it was administratively possible, grouping took cognizance of ability level as well as educational achievement level.

However, throughout the course of Project Edrehab, classroom group assignments were maintained as rather flexible. Students making satisfactory progress in arithmetic but continuing to demonstrate marked deficiencies in language arts, for example, were assigned an extra period of language arts and withdrawn from a similar period of arithmetic instruction. Formal and informal appraisal procedures were employed to assess trainee progress in each curricular experience. Bi-weekly staff conferences focussed primarily upon trainee progress, and, if necessary, modified curricular provisions to meet the specific needs of training for enrollees unable to master specific instructional units.

four LEARNING OUTCOMES

THE EFFECT OF CURRICULAR experiences upon undereducated hard-core unemployed adults enrolled in Project Edrehab was assessed at the end of twenty and thirty-six weeks of rehabilitative educational instruction respectively. Learning outcomes are here operationally defined as discrepancies between initial levels of performance on psychometric instruments which measure educational achievement, mental ability, and vocational aptitudes, on the one hand, and levels of performance on these instruments demonstrated subsequent to twenty and/or thirty six weeks of instruction on the other. The assessment of learning outcomes thus consists in a series of before-after comparisons on the inventoried performances of Project Edrehab enrollees.

This section presents a prose description of before-after comparisons of psychometric performance for Edrehab enrollees classified according to race and sex and partitioned on the basis of whether they completed educational training at the end of twenty weeks and entered formal vocational training programs, whether they completed twenty weeks of instruction in basic educational skills but terminated prior to the completion of thirty-six weeks, whether they completed thirty-six weeks of basic educational instruction and entered vocational training, or were terminated for good or not good cause prior to the completion of twenty weeks. Discrepancies in performance are expressed in terms of appropriate score units for the various instruments as defined in the second section of this report.

EDUCATIONAL ACHIEVEMENT: LANGUAGE ARTS

Educational achievement in the area of language arts was inventoried initially prior to enrollment and at the completion of twenty and thirty-six weeks respectively. Instruments used were the paragraph comprehension, word meaning, spelling, and language usage subtests of the Stanford. Performances are discussed in terms of grade placement equivalencies.

TABLE 1: LEARNING OUTCOMES IN PARAGRAPH COMPREHENSION

Enrollees	N	Initial Mean	Mean at 20 Weeks	Mean Gain at 20 Weeks	Mean at 36 Weeks	Mean Gain at 36 Weeks
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Group A: Completed 20 weeks of educational training, entered vocational

Male Negro	9	3.988	4.978	1.0		
Female Negro	8	3.750	5.943	2.2		
Male Caucasian	8	4.175	3.814	1.7		

Group B: Completed 36 weeks of educational training, entered vocational
(ineligible for vocational after 20 weeks)

Male Negro	12	3.255	4.241	1.0	5.685	2.4
Female Negro	10	3.811	4.630	0.8	6.189	2.3
Male Caucasian	12	3.483	4.731	1.3	5.370	1.9

Group C: Completed 20 weeks of educational training, ineligible for vocational, terminated for good cause between 20 and 36 weeks

Male Negro	4	3.530	4.550	1.0		
Female Negro	4	3.317	4.600	1.3		
Male Caucasian	2	3.162	3.813	0.7		
Female Caucasian	1	3.400	4.800	1.4		

Group D: Terminated for good cause before completing 20 weeks

Male Negro	10	3.335				
Female Negro	6	3.170				
Male Caucasian	13	4.162				
Female Caucasian	2	4.380				

Group E: Terminated not for good cause before completing 20 weeks

Male Negro	4	2.225				
Female Negro	1	7.000				
Male Caucasian	2	2.500				

Inspection of Table I relative to learning outcomes in paragraph comprehension suggests the following considerations:

1. Enrollees who completed educational training after twenty weeks and entered vocational training displayed a grand mean gain in paragraph comprehension skills of approximately one year and seven months.

2. Enrollees who completed educational training after thirty-six weeks and entered vocational training demonstrated, after twenty weeks of training, a gain in this skill of only one year and one month. But after thirty-six weeks, they had demonstrated a mean gain of approximately two years and three months. Thus, while they gained only one year and one month during the first twenty weeks, they gained an additional one year and two months during the following sixteen weeks.

3. Enrollees who completed twenty weeks of educational training but were not at that point eligible for vocational training and subsequently terminated for good cause demonstrated a mean gain of one year and one month, indicating their progress matched that of enrollees who completed the full thirty-six weeks.

4. The initial performance levels of enrollees who terminated for good cause prior to completing twenty weeks were superior to initial performance levels for enrollees terminated not for good cause, except in the case of the female Negro.

5. The males of both races terminated not for good cause demonstrated initial performance levels considerably below those of their counterparts in all other groups. It may be conjectured that poor motivation to learn this skill arose from a perception of overwhelming competition. On the other hand, the single female Negro terminated not for good cause demonstrated an initial performance level considerably above both the initial and final levels of her counterparts.

6. Higher initial performance levels seem to be associated with greater gains in a shorter time. However, the additional period of sixteen weeks seems to produce larger gains in this skill for trainees whose initial levels are lower than does the prior period of twenty weeks.

TABLE 2: LEARNING OUTCOMES IN WORD MEANING

Enrollees	N	Initial Mean	Mean at 20 Weeks	Mean Gain at 20 Weeks	Mean at 36 Weeks	Mean Gain at 36 Weeks
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Group A: Completed 20 weeks of educational training, entered vocational

Male Negro	9	4.575	6.689	2.1		
Female Negro	8	5.063	6.800	1.8		
Male Caucasian	8	3.988	7.850	3.9		

Group B: Completed 36 weeks of educational training, entered vocational (ineligible for vocational after 20 weeks)

Male Negro	12	3.862	4.388	0.5	5.815	2.0
Female Negro	10	5.033	6.610	1.6	6.850	1.8
Male Caucasian	12	4.000	5.041	1.0	5.841	1.8

Group C: Completed 20 weeks of educational training, ineligible for vocational, terminated for good cause between 20 and 36 weeks

Male Negro	4	4.244	4.525	0.1		
Female Negro	4	4.683	5.800	1.2		
Male Caucasian	2	4.271	4.700	0.5		
Female Caucasian	1	2.500	4.600	2.1		

Group D: Terminated for good cause before completing 20 weeks

Male Negro	10	4.214				
Female Negro	6	4.486				
Male Caucasian	13	4.275				
Female Caucasian	2	2.565				

Group E: Terminated not for good cause before completing 20 weeks

Male Negro	4	2.575				
Female Negro	1	4.900				
Male Caucasian	2	3.150				

Inspection of Table 2 relative to learning outcomes in word meaning suggest the following considerations:

1. Enrollees who completed educational training after twenty weeks and entered vocational training displayed a grand mean gain in word meaning skills of approximately two years and six months, though the very substantial gain demonstrated by male Caucasian enrollees of three years and nine months renders this grade mean deceptive.

2. Enrollees who completed educational training after thirty-six weeks and entered vocational training demonstrated, after twenty weeks of training, a gain in this skill of only one year. But after thirty-six weeks, they had demonstrated a mean gain of approximately one year and nine months. The discrepancy between grand mean gains after twenty and after thirty-six weeks of training suggests that the first twenty week period produced a mean gain larger than that produced by the latter sixteen week period.

3. Enrollees who completed twenty weeks of educational training but were not then eligible for vocational training and subsequently terminated for good cause demonstrated a mean gain of slightly less than one year. This progress matches that of enrollees who completed the full thirty-six weeks at the end of twenty weeks.

4. The initial performance levels of enrollees who terminated for good cause prior to completing twenty weeks were approximately equivalent to initial performance levels for their counterparts who completed educational training or terminated subsequent to the first twenty weeks.

5. The initial performance levels of enrollees terminated not for good cause before the completion of twenty weeks suggests that they had educational skills inferior their counterparts, except in the case of the single female Negro, who had demonstrated a level slightly higher than her counterparts who terminated for good cause during this period.

6. The relationship between initial performance levels and learning outcomes is not clear in the case of word meaning skills. Perhaps enrollees reach relatively readily a certain saturation point after which few increments are to be expected.

TABLE 3: LEARNING OUTCOMES IN SPELLING

Enrollees	N	Initial Mean	Mean at 20 Weeks	Mean Gain at 20 Weeks	Mean at 36 Weeks	Mean Gain at 36 Weeks
<u>Group A: Completed 20 weeks of educational training, entered vocational</u>						
Male Negro	9	5.050	6.622	1.6		
Female Negro	8	4.938	6.029	1.1		
Male Caucasian	8	5.238	6.113	0.9		
<u>Group B: Completed 36 weeks of educational training, entered vocational (ineligible for vocational after 20 weeks)</u>						
Male Negro	12	3.343	4.776	1.4	5.277	2.9
Female Negro	10	5.578	7.044	1.5	7.510	2.0
Male Caucasian	12	4.531	4.806	0.3	5.200	0.7
<u>Group C: Completed 20 weeks of educational training, ineligible for vocational, terminated for good cause between 20 and 36 weeks</u>						
Male Negro	4	4.000	4.750	0.8		
Female Negro	4	6.083	6.625	0.6		
Male Caucasian	2	4.538	5.100	0.6		
Female Caucasian	1	3.200	4.900	1.7		
<u>Group D: Terminated for good cause before completing 20 weeks</u>						
Male Negro	10	3.766				
Female Negro	6	5.483				
Male Caucasian	13	4.600				
Female Caucasian	2	3.800				
<u>Group E: Terminated not for good cause before completing 20 weeks</u>						
Male Negro	4	2.150				
Female Negro	1	5.400				
Male Caucasian	2	2.900				

Inspection of Table 3 relative to learning outcomes in spelling suggests these considerations:

1. Enrollees who completed basic educational skills training after twenty weeks and entered vocational training demonstrated a grand mean improvement equivalent to approximately one year and two months in grade placement terms.

2. Enrollees who completed basic educational training after thirty-six weeks and entered vocational training programs demonstrated, in the assessment following twenty weeks of instruction, a mean gain of slightly under one year and one month. After thirty-six weeks, their performance, on the average, demonstrated a mean gain of nearly one year and nine months over the initial level and of approximately eight months over the twenty week level.

3. Enrollees who terminated educational training between twenty and thirty-six weeks demonstrated a mean gain of less than nine months. However, their performances after twenty weeks approximated that of enrollees who continued for the full thirty-six weeks.

4. Enrollees who terminated for good cause before completing twenty weeks demonstrated, with the exception of the single female Negro, consistently higher initial performances than their counterparts who terminated not for good cause.

Inspection of Table 4 relative to learning outcomes in language usage suggests the following considerations:

1. Enrollees who completed educational rehabilitative training after twenty weeks and entered vocational training demonstrated a grand mean gain of slightly under one year and two months.

2. Enrollees who completed basic educational training after thirty-six weeks demonstrated a mean gain of only slightly over four months above the initial level after twenty weeks. After thirty-six weeks, however, they demonstrated a mean gain of one year over the initial level and of six months over the twenty week level. This suggests the resistance of patterns of language usage to facile change and development.

TABLE 4: LEARNING OUTCOMES IN LANGUAGE USAGE

Enrollees	N	Initial Mean	Mean at 20 Weeks	Mean Gain at 20 Weeks	Mean at 36 Weeks	Mean Gain at 36 Weeks
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Group A: Completed 20 weeks of educational training, entered vocational

Male Negro	9	3.213	4.756	1.5		
Female Negro	8	4.350	5.542	0.8		
Male Caucasian	8	3.638	4.813	1.2		

Group B: Completed 36 weeks of educational training, entered vocational (ineligible after 20 weeks for vocational)

Male Negro	12	2.650	3.018	0.4	4.792	1.2
Female Negro	10	4.033	4.700	0.7	5.722	1.7
Male Caucasian	12	3.740	3.916	0.2	4.750	1.0

Group C: Completed 20 weeks of educational training, ineligible for vocational, terminated for good cause between 20 and 36 weeks

Male Negro	4	3.629	4.325	0.7		
Female Negro	4	4.300	5.100	0.8		
Male Caucasian	2	2.350	3.350	1.0		
Female Caucasian	1	1.700	2.900	1.2		

Group D: Terminated for good cause before completing 20 weeks

Male Negro	10	2.996				
Female Negro	6	4.342				
Male Caucasian	13	3.671				
Female Caucasian	2	2.335				

Group E: Terminated not for good cause before completing 20 weeks

Male Negro	4	2.100				
Female Negro	1	7.300				
Male Caucasian	2	1.100				

3. Enrollees who terminated educational training between twenty and thirty-six weeks demonstrated a mean gain of approximately one year and slightly under one month, a gain nearly triple that made by enrollees who were tested after twenty weeks but remained within the instructional program and nearly equal to that made by enrollees who entered vocational training after twenty weeks.

4. Except in the case of the single female Negro, enrollees who terminated for good cause before completing twenty weeks demonstrated higher initial levels of performance than their contemporaries terminated not for good cause.

EDUCATIONAL ACHIEVEMENT: ARITHMETIC PROCESSES

Educational achievement in arithmetic processes were inventoried prior to enrollment, at the completion of twenty weeks of instruction, and at the completion of thirty-six weeks of instruction on the arithmetic reasoning and arithmetic computation subtests of the Stanford Achievement Test Battery.

Learning outcomes in arithmetic reasoning and arithmetic computation are presented in Tables 5 and 6. Scores and discrepancies are reported in terms of educational age grade equivalencies.

Inspection of Table 5 relative to learning outcomes in arithmetic reasoning suggests the following considerations:

1. Enrollees who completed basic educational training after twenty weeks and entered vocational training demonstrated a mean gain of just over nine months in arithmetic reasoning.

2. Enrollees who completed basic educational training after thirty-six weeks demonstrated a mean gain of only slightly under four months above their initial level after twenty weeks, a gain of less than half of that demonstrated by their counterparts who entered vocational training after twenty weeks. After thirty-six weeks, however, they demonstrated a mean gain of one year and one month over the initial level and of seven months over the twenty week level. Their final levels, however, do not reach the levels achieved after twenty weeks by their counterparts who entered vocational

TABLE 5: LEARNING OUTCOMES IN ARITHMETIC REASONING

Enrollees	N	Initial Mean	Mean at 20 Weeks	Mean Gain at 20 Weeks	Mean at 36 Weeks	Mean Gain at 36 Weeks
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Group A: Completed 20 weeks of educational training, entered vocational

Male Negro	9	4.511	5.433	0.9		
Female Negro	8	4.985	5.814	0.9		
Male Caucasian	8	5.563	6.500	1.0		

Group B: Completed 36 weeks of educational training, entered vocational (ineligible after 20 weeks for vocational)

Male Negro	12	3.927	4.213	0.3	5.623	1.7
Female Negro	10	5.440	5.640	0.2	6.438	1.2
Male Caucasian	12	4.147	4.725	0.6	5.250	1.3

Group C: Completed 20 weeks of educational training, ineligible for vocational, terminated for good cause between 20 and 36 weeks

Male Negro	4	4.236	4.700	0.5		
Female Negro	4	5.233	6.225	1.0		
Male Caucasian	2	4.550	4.817	0.3		
Female Caucasian	1	3.200	4.500	1.3		

Group D: Terminated for good cause before completing 20 weeks

Male Negro	10	4.282				
Female Negro	6	4.738				
Male Caucasian	13	4.587				
Female Caucasian	2	3.500				

Group E: Terminated not for good cause before completing 20 weeks

Male Negro	4	3.200				
Female Negro	1	5.000				
Male Caucasian	2	3.100				

TABLE 6: LEARNING OUTCOMES IN ARITHMETIC COMPUTATION

Enrollees	N	Initial Mean	Mean at 20 Weeks	Mean Gain at 20 Weeks	Mean at 36 Weeks	Mean Gain at 36 Weeks
<u>Group A: Completed 20 weeks of educational training, entered vocational</u>						
Male Negro	9	4.344	5.211	0.9		
Female Negro	8	4.114	5.400	1.3		
Male Caucasian	8	4.675	6.063	1.4		
<u>Group B: Completed 36 weeks of educational training, entered vocational (ineligible after 20 weeks for vocational)</u>						
Male Negro	12	3.687	4.844	1.2	6.058	2.4
Female Negro	10	5.080	6.200	1.2	6.938	1.9
Male Caucasian	12	3.507	4.650	1.0	5.510	2.0
<u>Group C: Completed 20 weeks of educational training, ineligible for vocational, terminated for good cause between 20 and 36 weeks</u>						
Male Negro	4	4.236	4.900	0.7		
Female Negro	4	5.233	6.225	1.0		
Male Caucasian	2	4.114	4.750	0.6		
Female Caucasian	1	3.100	4.700	1.6		
<u>Group D: Terminated for good cause before completing 20 weeks</u>						
Male Negro	10	4.013				
Female Negro	6	4.842				
Male Caucasian	13	4.595				
Female Caucasian	2	2.850				
<u>Group E: Terminated not for good cause before completing 20 weeks</u>						
Male Negro	4	2.900				
Female Negro	1	7.900				
Male Caucasian	2	3.700				

training after twenty weeks.

3. Enrollees who terminated educational training for good cause between twenty and thirty-six weeks demonstrated a mean gain of just over eight months, a gain double that made by enrollees who remained in the program for thirty-six weeks by the twenty week level and nearly equal to that made by enrollees who completed the educational program at twenty weeks to enter vocational training.

4. Except in the case of the single female Negro, enrollees who terminated for good cause before completing twenty weeks demonstrated higher initial levels of performance than their counterparts terminated not for good cause.

Inspection of Table 6 relative to learning outcomes in arithmetic computation suggests the following considerations:

1. Enrollees who completed basic educational training after twenty weeks and entered vocational training demonstrated a mean gain of one year and two months in arithmetic computation.

2. Enrollees who completed basic educational training after thirty-six weeks demonstrated after twenty weeks a mean gain in arithmetic computation of just over one year and one month. After thirty-six weeks, however, they demonstrated a mean gain of just over one year and eight months above the initial level and of seven months over the twenty week level. The final scores of male enrollees in this group did not reach as high levels after thirty-six week as were attained by their counterparts after twenty weeks; the female Negro enrollees surpassed their counterparts both at the twenty and at the thirty-six week levels.

3. Enrollees who terminated educational training between twenty and thirty-six weeks for good cause demonstrated a mean gain of approximately nine months, a gain less than that achieved by their counterparts who completed training.

4. Except in the case of the single female Negro, enrollees who terminated for good cause before completing twenty weeks demonstrated higher initial levels of performance than those terminated not

for good cause.

5. The initial levels of performance in arithmetic computation of enrollees terminated for good cause in some cases exceeded those of their counterparts who continued in educational training.

VOCATIONAL APTITUDES

Vocational aptitudes were inventoried prior to enrollment, at the completion of twenty weeks of instruction, and at the completion of thirty-six weeks of instruction by means of the General Aptitude Test Battery.

Table 7 reports levels of vocational aptitudes prior and subsequent to intensive rehabilitative instruction. Scores are reported in terms of GATB scaled score units. Enrollees are grouped into five subsections: Group A contains enrollees who completed 20 weeks of educational training and entered vocational training; B, those who completed 36 weeks of educational training and entered vocational training, but who were ineligible for vocational training after 20 weeks; C, those who completed 20 weeks of educational training, were not eligible for vocational training at that point, and subsequently terminated for good cause before completing 36 weeks of educational training; D, those who terminated for good cause prior to completing 20 weeks of educational training; and E, those terminated not for good cause prior to completing 20 weeks of educational training.

Sex and race codes are used to identify sub-groups within each group of enrollees. MN is coded for Male Negro enrollees, FN for female Negro enrollees, MC for male Caucasian, and FC for female Caucasian.

Inspection of Table 7 relative to learning outcomes in terms of change in inventoried vocational aptitudes suggests these considerations:

1. Male Negro enrollees who completed educational training in 20 weeks and entered vocational training (Code AMN) demonstrated gains from initial performance levels of 8 scaled score points in verbal aptitude, 19 in numerical, 13 in spatial, 29 in form perception, 18 in clerical perception, 14 in motor coordination, 8 in finger dexterity, and 8 in manual dexterity.

2. Female Negro enrollees in Group A demonstrated mean gains of 13 in verbal, 18 in numerical, 9 in spatial, 13 in form perception, 10 in

TABLE 7: LEARNING OUTCOMES IN VOCATIONAL APTITUDES

Code	GATB-V			GATB-N			GATB-S			GATB-P		
	Initial	20 Wk	36 Wk	Initial	20 Wk	36 Wk	Initial	20 Wk	36 Wk	Initial	20 Wk	36 Wk
AMN	71.8	79.6		55.3	74.7		68.1	81.0		48.3	77.2	
AFN	73.1	86.0		61.2	79.4		75.2	84.1		63.1	76.8	
AMC	72.2	82.3		60.6	81.7		78.8	86.6		63.0	73.3	
BMN	65.8	69.7	81.0	50.9	66.4	67.8	60.2	66.7	73.6	39.6	56.8	66.1
BFN	71.7	76.8	79.7	65.1	85.1	89.0	65.4	81.9	87.2	71.4	89.3	93.4
BMC	71.6	76.3	78.4	58.6	65.6	67.6	75.3	81.1	85.1	61.5	74.5	78.3
CMN	69.5	75.4		59.7	70.5		66.5	73.8		59.7	65.5	
CFN	71.0	77.0		59.6	85.5		56.3	68.7		56.3	79.2	
CMC	68.3	78.3		69.7	78.6		68.1	92.0		73.4	82.6	
CFC	63.0	76.0		40.0	69.0		58.0	71.0		35.0	80.0	
DMN	67.9			54.2			72.8			47.3		
DFN	71.9			62.8			68.1			66.0		
DMC	70.2			63.0			72.5			66.0		
EMN	61.6			49.6			60.0			59.7		
EFN	69.0			81.0			107.0			99.0		
EMC	63.0			52.0			58.0			57.0		
Code	GATB-Q			GATB-K			GATB-F			GATB-M		
	Initial	20 Wk	36 Wk	Initial	20 Wk	36 Wk	Initial	20 Wk	36 Wk	Initial	20 Wk	36 Wk
AMN	69.9	87.5		65.3	79.4		75.6	83.3		83.1	89.2	
AFN	75.7	85.3		84.5	97.1		89.7	116.8		102.8	106.2	
AMC	72.2	86.6		65.7	77.5		67.5	87.5		79.7	84.3	

TABLE 7, continued

BMN	64.8	69.7	78.0	52.2	57.1	72.7	55.6	67.5	79.4	63.2	70.8	76.3
BFN	80.9	90.6	93.3	81.7	101.7	105.6	85.6	104.2	112.3	98.7	101.9	120.1
BMC	71.9	74.5	79.4	67.8	69.1	73.6	67.8	70.1	82.3	71.7	81.6	91.3
CMN	71.3	84.7		65.3	79.4		77.6	95.2		99.6	128.0	
CFN	74.0	87.5		73.3	98.2		96.5	117.0		81.9	93.5	
CMC	71.6	73.3		66.6	71.0		70.6	78.5		80.1	86.5	
CFC	74.0	81.0		53.0	85.0		37.0	69.0		43.0	109.0	
DMN	67.3			60.8			66.3			77.9		
DFN	77.3			84.6			89.3			99.8		
DMC	75.7			70.5			69.0			80.7		
DFC	79.0			78.5			65.5			94.0		
EMN	61.0			47.6			58.3			70.3		
EFN	95.0			135.0			85.0			90.0		
EMC	78.5			62.0			73.0			63.0		

clerical perception, 13 in motor coordination, 17 in finger dexterity, and 6 in manual dexterity.

3. Male Caucasians in Group A demonstrated mean gains of 10 in verbal, 21 in numerical, 8 in spatial, 10 in form perception, 14 in clerical perception, 12 in motor coordination, 20 in finger dexterity, and 5 in manual dexterity.

4. Male Negro enrollees who completed 36 weeks of educational training prior to entry into vocational training but were ineligible to enter following 20 weeks of training (Code BMN) were tested both at the conclusion of 20 and of 36 weeks. After 20 weeks they demonstrated mean gains above initial levels of 5 scaled score units in verbal aptitude, 16 in numerical, 6 in spatial, 17 in form perception, 5 in clerical perception, 5 in motor coordination, 12 in finger dexterity, and 7 in manual dexterity. After 36 weeks they demonstrated mean gains of 16 in verbal, 17 in numerical, 13 in spatial, 27 in form perception, 14 in clerical, 20 in motor coordination, 24 in finger dexterity, and 23 in manual dexterity.

5. Female Negro enrollees in Group B demonstrated, after 20 weeks, mean gains of 5 in verbal, 20 in numerical, 15 in spatial, 17 in form perception, 10 in clerical perception, 20 in motor coordination, 19 in finger dexterity, and 3 in manual dexterity. After 36 weeks, their mean gains were 8 in verbal, 24 in numerical, 22 in spatial, 22 in form perception, 13 in clerical, 20 in motor coordination, 24 in finger dexterity, and 13 in manual dexterity.

6. Male Caucasian enrollees in Group B demonstrated, after 20 weeks, mean gains of 5 in verbal, 7 in numerical, 6 in spatial, 13 in form perception, 3 in clerical, 5 in motor coordination, 12 in finger dexterity, and 7 in manual dexterity. After 36 weeks, their mean gains were 7 in verbal, 9 in numerical, 10 in spatial, 17 in form perception, 8 in clerical, 6 in motor coordination, 15 in finger dexterity, and 20 in manual dexterity.

7. Enrollees who completed 20 weeks of rehabilitative educational training but were ineligible for vocational training at that point and subsequently terminated between 20 and 36 weeks are coded in Group C. Male Negro enrollees demonstrated, after 20 weeks, mean gains above their initial levels of 6 in verbal, 11 in numerical, 7 in spatial perception, 6 in form perception, 13 in clerical perception, 14 in motor coordination, 18 in finger dexterity, and 29 in manual dexterity.

8. Female Negro enrollees in Group C demonstrated after 20 weeks mean gains of 6 in verbal, 26 in numerical, 12 in spatial perception, 23 in form perception, 13 in clerical perception, 25 in motor coordination, 21 in finger dexterity, and 12 in manual dexterity.

9. Male Caucasian enrollees in Group C demonstrated after 20 weeks mean gains of 10 in verbal, 9 in numerical, 24 in spatial, 9 in form perception, 2 in motor coordination, 5 in clerical perception, 8 in finger dexterity, and 6 in manual dexterity.

10. The single female Caucasian enrollee in Group C gained after 20 weeks 13 in verbal, 29 in numerical, 13 in spatial, 45 in form perception, 7 in clerical perception, 32 in motor coordination, 8 in finger dexterity, and 6 in manual dexterity.

11. In general, enrollees who terminated for good cause prior to completing 20 weeks of rehabilitative instruction (Group D) demonstrated higher initial levels in vocational aptitude than their otherwise similar counterparts who terminated not for good cause before they completed 20 weeks of instruction (Group E).

12. In general, initial performance levels in verbal aptitude are more highly resistant to change than are initial levels in numerical aptitude.

13. In general, there appears to obtain differential rates of learning acceleration on the basis of both race and sex. The female Negro appears to learn faster than males of either sex, and Negro males appear to learn faster than Caucasian males, both in regard to vocational aptitude and to educational achievement. However, in view of the individualized curricular program developed to meet the needs of the individual student, this conclusion is very likely spurious. Greater gains may simply reflect greater emphasis upon certain areas in curricular provisions for the individual enrollee.

14. Generally, higher initial levels of performance are associated with greater mean gains, both in educational achievement and in vocational aptitude. This observation holds even for the areas of physical dexterity, which were not focal points for instruction in Project Edrehab.

MENTAL ABILITY SCORES

Three instruments were employed to assess mental ability in connection with Project Edrehab. The Revised Beta Examination was administered prior to enrollment and at the completion of 20 and 36 weeks of instruction. The California Short-Form Test of Mental Maturity (CTMM) was administered prior to enrollment and at the completion of thirty-six weeks. The Ammons-Ammons Quick Test (QT), a clinical instrument, was administered during the first week of enrollment and at the completion of twenty weeks.

Table 8 presents data relevant to changes in mean ability scores during the course of participation in Project Edrehab. Enrollees have been grouped in the same fashion as they were grouped in Table 7. Scores are reported in terms of intelligence quotient units for the measure in question.

Inspection of Table 8 relative to change in inventoried mental ability suggest the following considerations:

1. Male Negro enrollees in Group A, or those who completed educational training in 20 weeks and entered vocational training, demonstrated a mean gain in intelligence quotient units over their initial performance of 8 on the Beta and 20 on the Quick Test.

2. Female Negro enrollees in this group demonstrate a mean gain of 6 on the Beta and 24 on the Quick Test.

3. Male Caucasian enrollees in Group A demonstrate a mean gain of 12 on the Beta and 14 on the Quick Test.

4. Male Negro enrollees in Group B, or those who completed educational training in 36 weeks, demonstrated after 20 weeks a mean gain over initial levels of 3 intelligence quotient units on the Beta and 22 on the Quick Test. After 36 weeks, they demonstrated a mean gain of 8 on the Beta and 30 on the California.

5. Female Negro enrollees intensively trained for 36 weeks demonstrate, after 20 weeks, a mean gain of 9 on the Beta and 11 on the Quick Test. After 36 weeks, they demonstrate a mean gain of 19 on the California and 11 on the Beta.

TABLE 8: LEARNING OUTCOMES AND MENTAL ABILITY SCORES

Enrollees	BETA		36 Wk	CTMM		QT	
	Initial	20 Wk		Initial	36 Wk	Initial	20 Wk
AMN	92.1	100.9		58.8		71.6	91.6
AFN	83.8	89.2		66.5		63.4	87.2
AMC	88.5	100.0		57.3		85.1	99.3
BMN	84.0	87.1	92.3	47.7	77.1	64.7	86.8
BFN	84.8	93.8	95.2	67.5	86.6	75.0	86.1
BMC	91.5	93.2	98.4	57.3	68.3	62.3	90.1
CMN	87.1	89.8		64.0		68.2	80.4
CFN	73.1	82.5		54.7		64.0	86.0
CMC	90.5	100.5		69.0		68.0	85.3
CFC	68.0	82.0		54.0		54.0	78.0
DMN	85.1			53.5		87.9	
DFN	81.1			63.0		85.6	
DMC	96.5			69.0		88.9	
EMN	68.7			37.3		84.0	
EFN	74.0			93.0		86.0	
EMC	69.0			46.0		83.0	

6. Male Negro enrollees in this group demonstrate after 20 weeks a mean gain of 2 on the Beta and 28 on the Quick Test. After 36 weeks, they demonstrate a mean gain of 8 on the Beta and 11 on the California.

7. Male Negro enrollees in Group C, or those who terminated for good cause between 20 and 36 weeks, demonstrated after 20 weeks a mean gain of 2 on the Beta and 12 on the Quick Test.

8. Female Negroes in this group demonstrate after 20 weeks a mean gain of 9 on the Beta and 22 on the Quick Test.

9. Male Caucasians in Group C demonstrate after 20 weeks a mean gain of 10 on the Beta and 17 on the Quick Test.

10. The single female Caucasian in Group C demonstrates a gain of 14 on the Beta and 24 on the Quick Test.

11. In general, enrollees who terminated for good cause before completing 20 weeks (Group D) demonstrated higher initial levels than their counterparts (Group E) who terminated not for good cause.

12. In general, scores on the Beta appear more stable than scores on either the California or the Quick Test. Stability of this score seems to indicate that the Beta represents a closer approximation to "pure" or native ability, since scores are less affected by intervening learning experiences. The California and the Quick Test appear more susceptible to change following intervening learning experiences. This consideration is another argument in favor of the use of the Beta as a measuring device to tap the native potential of subjects whose educational development and hence intellectual development has been impoverished.

13. Gains in mental ability scores (as in vocational aptitude scores) must be interpreted in light of the standard deviations for each test. In each case, the standard deviation approximates 20 score units.

14. Generally, higher initial scores in mental ability are associated with smaller gains. This observation also suggests the stability of mental ability scores once a point has been reached at which saturation is likely. Increments above this level are unlikely.

LEARNING OUTCOMES AND SOCIAL BEHAVIOR TRAITS

Each week, in connection with staff meetings, members of the Project Edrehab instructional staff completed trait rating schedules for each enrollee with whom they had contact. Typically, an enrollee had some class contact with each of the four instructors, although a few had contact with only three. The trait rating schedule, designed for use in the Project but relying heavily on other instruments, was an attempt to codify and systematize global impressions of instructors. Results were employed to chart directions for group guidance efforts, in an attempt to socialize unfavorable response patterns to group work and school situations and in interpersonal relationships.

Instructors were directed to rate each enrollee on each trait according to a scale range from 1 for negative to 5 for positive, with 2 representing semi-negative, 3 representing neutral, and 4 representing semi-positive. Since it was assumed that behavior is a function of self-in-situation, it had been anticipated that ratings by instructors who experienced the enrollee in varying situations would vary quite widely. The language arts class, for example, might be more threatening to some students, and their asocial or antisocial behaviors could be ascribed to their compensatory efforts. Nonetheless, there was high agreement among raters.

Even though the trait rating schedule was not intended to serve as an exact psychometric device, before-after comparisons prove enlightening. Table 9 presents ratings on the schedule during the trainee's first week of enrollment and during his last week of enrollment. Ratings by each instructor were first meaned for each enrollee; then mean ratings were again averaged to produce grand means according to groups classified by rate and sex.

Inspection of Table 9 relative to changes in rated social behavior traits suggests the following considerations:

1. At the time of enrollment in Project Edrehab, male Caucasian enrollees were described as positive in their attitudes towards other students, toward instructors, and toward work, in cooperation with instructors and students, and in interest in training. They were relatively neutral in acceptance of responsibility, personal initiative, personal appearance, self-discipline, ability to follow directions, acceptance of self-limitations and of criticism, attempts to harmonize, encourage others to participate, and interest in the needs of others. They were described as relatively neg-

TABLE 9: LEARNING OUTCOMES AND SOCIAL BEHAVIOR TRAITS

Trait	MC		FC		MN		FN	
	Initial	Final	Initial	Final	Initial	Final	Initial	Final
Attitudes toward students	3.9	4.7	4.0	4.6	3.9	4.8	3.8	4.6
Attitudes toward teacher	3.7	4.4	3.3	4.3	3.7	4.8	3.8	4.6
Attitudes toward work	3.8	4.5	3.3	4.7	3.5	4.5	3.8	4.7
Self-confidence	2.4	3.8	2.0	3.3	2.9	3.9	3.5	4.2
Acceptance of responsibility for own behavior	3.3	4.3	2.3	3.6	3.2	4.2	3.8	4.6
Interest in training	3.8	4.2	3.6	5.0	3.5	4.5	3.8	4.7
Personal initiative	2.9	3.8	3.0	4.3	3.1	3.9	3.6	4.2
Personal appearance								
(appropriateness)	3.3	4.2	3.6	4.6	3.4	4.0	3.8	4.5
Self-discipline	3.4	4.2	3.0	3.6	3.3	4.1	3.6	4.5
Cooperation with teacher	3.9	4.7	3.6	5.0	3.8	4.7	4.0	4.8
Cooperation with students	3.7	4.4	4.0	4.3	3.7	4.6	3.8	4.7
Courtesy	4.0	4.7	4.0	5.0	4.1	4.9	4.0	4.8
Ability to follow directions	2.8	3.7	2.3	3.0	3.0	3.9	3.7	4.6
Acceptance of self-limitations	2.7	3.6	2.7	2.7	2.9	3.9	2.9	4.3
Acceptance of criticism	3.3	4.2	3.3	4.6	3.4	4.6	3.4	4.8
Initiates project or discussion	2.0	2.6	1.0	2.3	2.0	2.6	3.7	4.5
Harmonizes group feeling, makes peace among members	2.9	3.7	2.6	3.6	3.2	4.0	3.3	4.1
Encourages others to participate	2.4	2.9	1.3	2.6	2.5	3.2	2.9	3.2
Attempts to dominate others	2.7	1.5	1.0	1.6	1.8	1.4	3.1	1.6
Often rationalizes or alibi's	1.9	1.2	2.3	1.3	1.9	1.5	2.6	1.1
Apathetic toward needs of others	2.6	1.2	3.0	1.0	1.7	1.1	2.8	1.2

ative in self-confidence, efforts to initiate discussion, and attempts to rationalize. (Negative ratings in attempts at rationalization constitute, however, the judgement of a positive trait.) By the time of their departure from the program, their social behavior traits were described as having changed in more socialized directions.

2. At the time of enrollment, female Caucasian trainees were described as positive in attitudes towards students, interest in training, personal appearance, cooperation with teachers and students, and courtesy. They were described as neutral in attitudes towards teachers and work, personal initiative, self-discipline, acceptance of self-limitations, acceptance of criticism, efforts to harmonize, and sensitivity toward needs of others. They were described as negative in self-confidence, acceptance of responsibility, ability to follow directions, initiatory behavior in group situations, encouragement of others, attempts to dominate, and tendency to rationalize. By the time of their departure, their social behavior traits had changed in more socialized directions, with the exception of acceptance of self-limitations, which showed no change.

3. At the time of enrollment, male Negro trainees were described as positive in attitudes towards teachers and students, cooperation with teachers and students, and courtesy. They were described as relatively neutral in attitudes toward work, self-confidence, acceptance of responsibility, interest in training, personal initiative, personal appearance, self-discipline, ability to follow directions, acceptance of self-limitations and of criticism, and efforts to harmonize group relations. They were described as negative in initiatory behavior in groups, encouragement of others, efforts to dominate, attempts to rationalize, and sensitivity. By the time of their departure, their social behavior traits had changed in more socialized directions.

4. At the time of enrollment, female Negro trainees were described as positive in attitudes towards students, teachers, and work, in acceptance of responsibility, interest in training, personal initiative, personal appearance, self-discipline, cooperation with teachers and students, courtesy, ability to follow directions, and initiatory behavior. They were described as relatively neutral in self-confidence, acceptance of self-limitations, acceptance of criticism, encouragement of others, attempts to dominate others, and apathy toward the needs of others. They were described as negative only in their efforts to rationalize, but this description indicates a positive trait. By the time of their departure from Project Edrehab, their social behavior

traits were described as having changed in more socialized directions.

5. Insofar as the trait rating schedule is a valid approximation to the codification of the global impressions made by enrollees on observers, the female Negro enrollee may reasonably be regarded as the most "socialized" of the student groups at the time of enrollment. Her initial ratings indicate almost uniformly socially approbated and encouraged behavioral predispositions.

6. The most encouraging changes in the perception of Edrehab staff members were changes in self-confidence, which increased from enrollment to departure, and in apathy toward others, which decreased and indicated a corresponding increment in sensitivity toward others. Group and individual counseling efforts had been directed toward these ends.

five SUMMARY

PROJECT EDREHAB FOCUSSED on instructional experiences in basic educational skills to ready a group of economically superfluous, undereducated, hard-core unemployed workers to undertake profitably a program of vocational training and to develop readiness to return to the labor force economically and psychologically self-sufficient. Its coordinate research effort concerned characteristics of hard-core unemployed workers and the impact of curricular experiences upon a spectrum of dimensions of achievement, aptitude, mental ability, and social behavior traits.

This report has summarized research findings. Stated in broad general terms, the most salient considerations which have emerged from this research are the following:

1. An overwhelming majority of hard-core unemployed workers, within the limitations of this study, have been found to be educationally rather than mentally retarded.
2. It seems highly likely that such instruments as the California Test of Mental Maturity and the G score of the General Aptitude Test Battery are inadequate to measure accurately the learning ability of workers characterized as hard-core unemployed. There seems to be adequate reason to suspect educational impoverishment whenever attention is focussed on the hard-core unemployed worker. Hence, selection procedures need to account this high probability. Selection procedures which employ inadequate instruments simply reinforce the hard-core unemployed worker's quandry.
3. From the description of educational and vocational characteristics of hard-core unemployed workers, sex differences seem more profound than race differences in the underlying social-psychological-educational-economic dynamics.

4. In a relatively short period, twenty weeks, undereducated hard-core unemployed workers have been assisted to compensate for educational deficiency of from one to three years. Often this compensation was sufficient to ready them to undertake vocational training profitably.

5. For some workers, especially those more severely retarded educationally, a period of thirty-six weeks is effective in compensating for educational deficiency of from one to three years.

6. Instructional experiences in basic education extending over twenty or thirty-six weeks are associated with marked and dramatic changes in both educational aptitudes and in inventoried mental ability, even though these dimensions are not focal points for instructional activity.

7. Instructional experiences are associated with changes in social behavior traits in more mature, more socialized directions.

Perhaps the primary value in Project Edrehab, as Professor Martin Hamburger of New York University asserted during a symposium on this project presented before the National Vocational Guidance Association and the American Rehabilitation Counseling Association, is its demonstration of a theory of human behavior which holds that, given conducive circumstances, people behave so as to maximize their internal strengths in harmony with society. As Professor Hamburger (1965) noted, one is unemployed not simply as a function of self but as a function of self in relation to a prevailing social structure, and the American industrial structure can no longer absorb large segments of the population who in an earlier era would have been part of the mainstream of American life. One is mentally rather than educationally retarded not on the basis of one's performance, but on the basis of the structure of a given testing instrument. Project Edrehab has itself been part of society's efforts to compensate for inadequacies in the prevailing social structure. But compensatory efforts are not enough; society needs to reorganize so that the need for compensatory education is obviated. The implications for educational and social policy are myriad, profound, and disturbing.

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