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A COMPARATIVE STUDY OF POST-SCHOOL ADJUSTMENT
IN EDUCABLE MENTALLY RETARDED GRADUATES
FROM SEGREGATED SPECIAL SCHOOLS AND
INTEGRATED SPECIAL CLASSES

DISSERTATION
Presented in Partial Fulfillment of the Requirements for
the Degree Doctor of Philosophy in the Graduate
School of The Ohio State University

By
Roscoe B. Lafferty, Jr., B.S., M.A.

The Ohio State University
1974

Approved by
James D. Bracken
Advisor
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Area of Special Interest . Exceptional Children
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CHAPTER I

INTRODUCTION AND STATEMENT OF THE PROBLEM

INTRODUCTION

The problem of providing adequate services in public schools for secondary age educable mentally retarded students has become increasingly more apparent during the past few years. Research to determine the effectiveness of special class and special school placement has been scant, and findings contradictory. The efficacy of special education as a vehicle in providing educational services for the mentally retarded has yet to be decided; however the number of classes has increased rapidly for somewhat over sixty years.

Concern over this growth has created some problems among special educators as they cannot reach agreement on the type or kind of service that best equips the mentally retarded to take their place in society. Consequently, mental retardation programs have continued to evolve without any direction as to the most appropriate educational model.
With the rapid development of programs, the problem of providing adequate services to secondary students with handicaps and special needs has become increasingly more apparent during the past few years.\(^1\) Special educators, vocational education personnel, and others have combined their efforts to provide programs that would equip the mentally retarded student for adult life.

At present, two major administrative models for delivery of services to secondary mentally retarded students are utilized; that of the self contained integrated class within a regular school, and the segregated special school.\(^2\)

**HISTORICAL BACKGROUND**

The acceptance and development of secondary programs for the mentally retarded has been slow as is evidenced by the fact that only 8,616 students were enrolled in the

---


secondary schools in 1940.¹

Kokaska² stated that not until 1945 did evidence begin to appear in the literature that programs were offering continuity from elementary through secondary school.

As secondary programs are still considered a frontier of public education for the mentally retarded,³ the significance of which type of program, integrated or segregated, has been discussed by prominent educators.

Cruickshank and Johnson support the special class within the regular school setting as they state:

It seeks to keep the retarded child in contact with children of his own peer group, yet to protect him from the competition of the high school in sufficient degree to prevent him from being so hopelessly discouraged that he cannot utilize the abilities which he has...

In such a concept of the high school, the mentally retarded child can rightfully take his place. The advantages of such a program are obvious to the thoughtful person. It is positive in every respect.


The educable child with retarded mental development in the high school situation associates with his peer group; a group of children whose speaking vocabulary and non-academic interests are essentially the same as those of the retardate. At the same time the retarded child is provided the security of a good special class.¹

A growing body of evidence from efficacy studies (Johnson, 1950; Johnson and Kirk, 1951; Cassidy and Stanton, 1959; Thurstone, 1959; Goldstein, et. al., 1965) has shown that the retarded make greater advances in social competence and social adjustment in a special class setting.² As the more poorly adjusted child tends to be placed in special classes in the first place, such evidence strongly suggests that the special class is better suited to the tasks of providing the retarded child with friends, a chance to overcome a crippling sense of failure, and more adequate preparation for employment.

One major detriment in special class placement has been the organizational patterns typical to American public schools: (1) the 8-4 plan (elementary plus four years high

¹Ibid., p. 124-125.

school); (2) the 6-3-3 plan (elementary, junior high and
senior high); and (3) the 6-6 plan (elementary plus a com­
bined junior-senior high). The difficulty arose in trying
to fit suitable special class programs into the varying
patterns. This factor alone may affect the future employ­
ability of the special class student as he may spend a large
number of years in the lower end of one of the plans, leave
school at age sixteen and miss out on those common learnings
that are directly related to occupational adjustment.

Blatt states that evidence for the superiority of
special class placement is meager as no studies, to date,
have conclusively brought this out; neither does the inves­
tigator support the separate school in that it leads to
isolation and segregation of the handicapped. Blatt does
state, however, that the standard programs for the mentally
retarded remain the self contained integrated class or the
segregated special school.

Kirk cited the segregated special school as one
means of providing services to secondary mentally retarded

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1Jerome Rothstein, ed., Mental Retardation (2nd ed.;

2Blatt, op. cit., p. 351.

3Samuel A. Kirk, Educating Exceptional Children
students. However, he does feel that the current trend is away from this type of administrative plan due to organizational problems. Many parents have objected to sending their children to such schools as they are quite often stigmatized as "dummy" schools.

Some educators feel that the special school provides an opportunity for more habilitation services and is helpful in developing self-esteem among many of the students as it offers them the opportunity to become stars. Scheduling is thought to be easier and, if one could hypothesize from the many efficacy studies, it offers an opportunity for both personal and social adjustment.

Recently, growth of secondary programs has been rather rapid as shown by Kokaska's estimate of 66,373 students enrolled in secondary special education programs for the 1965-66 school year. Yet, there has been no published data indicating the viability of any one organizational pattern over another.

Some alternative educational models have been suggested but minimal research, as the literature indicates, has

\[1\text{Kokaska, op. cit., p. 24.}\]

\[2\text{Clark and Oliverson, op. cit., p. 541.}\]
gone into the sociocivic, economic, and employment status of students who graduated from a segregated special school and those from an integrated self-contained special class and published data which showed the superiority of one model from another leading to better over-all adjustment of students completing the programs.

THE PROBLEM

The problem of providing the best model for educating mentally retarded adults to take their place in society is one that creates many questions. Does the segregated special school or the integrated special class better prepare students for sociocivic responsibility? Which model best prepares its graduates for post-school employment? How do students in the two different models feel about themselves? What effect does segregation from their normal age-group peers have on the self concept of the mentally retarded?

These and many more questions could be asked concerning the mentally retarded. This study does not propose to answer all these questions, but does hope to contribute toward a better understanding of the problems.

Purpose of the Study

The purpose of this study was to determine the employ-
ment status of educable mentally retarded adults, either current graduates or those who have been out of school up to six years. In addition, this investigation will make the following comparisons: (1) the sociocivic status of those who participated in segregated programs with those who participated in self contained integrated programs; (2) the economic status of those who participated in segregated programs with those who participated in self contained integrated programs; and (3) the type of curriculum that was offered the students from each of the programs.

**Significance of the Study**

Accountability has spread to all segments of education including special education. It involves establishing specific goals that have measurable performance objectives; then an analysis of the goals and objectives in terms of the product (students) is carried out and alternative systems are looked at if needed. This has not been carried out with any measure of success in special education.

Kennedy's study of the retarded, cited by Kolstoe, showed they were just as inferior to the non-retarded in

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1960 as they had been in 1948.\(^1\) It appears when the retarded are compared with age-group peers who differ only in IQ, that they are no more adequate as adults than they were as students. A lack of research into new methods for educating the retarded was felt to be responsible for this fact.

Nelson and Schmidt\(^2\) brought out the fact that too many professional educators have either increased their efforts in maintaining the status quo, or in maintaining past behaviors, as if everything was going smoothly. They cited three areas of difficulty in dealing effectively with the problems in special education: (1) adherence to the past even if inadequacies exist; (2) the inability to define problems adequately and generate empirical statements; and (3) a failure to examine the borrowed constructs upon which our present programs are based.\(^3\)

Dunn\(^4\) insisted that a better education than special


\(^3\) Ibid., p. 382.

\(^4\) Lloyd M. Dunn, "Special Education for the Mildly Retarded-Is Much of it Justifiable?" Exceptional Children, 35: 5-10, 1968.
class placement was needed for the mentally retarded. The study related that a large portion of our special education programs, in their present forms, are obsolete and unjustifiable, and advocated changes in school organization and curriculum.

Johnson\(^1\) stated that with better prepared teachers, more program money, smaller class loads, and special curricula, the special class mentally retarded students should be accomplishing the objectives of education at the same level as similar mentally retarded students who have not had the special class benefits, but this does not appear to be the case. This study seeks a re-evaluation of our present delivery services in special education and recommends a strong emphasis on academic skills in the present special classes.

One study, cited by Gallagher, looked upon special education as exclusion masqueraded as remediation.\(^2\) Furthermore, that the learning requirements of the pupils should

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determine the organization and administration of special education and not etiological or medical classification which are the basis for our present secondary models.

A number of alternative programs to the special class and special school pattern have been proposed including itinerant teaching, resource room programs, special education consultants to general education teachers, and special educators serving as developers of prescriptive programs to be used by general educators.¹ All hinge on special educators developing greater coordination with general educators; this in itself may affect the implementation of the alternatives as special educators seem to want to keep the "entity" of special education alive as "separate" education.

From the above studies one can distinguish a flavor of dissatisfaction with the existing programs. One reason for this lies in the expansion of present programs without sufficient research to prove the efficacy of the present ones.

The expansion of programs has been nationwide as West Virginia's mentally retarded programs will testify.

Since the first state recognized classes in 1955,¹ the program has grown tremendously. This rapid rate of expansion is illustrated by the thirty-four classes serving 439 mentally retarded students during the 1958-59 school year² to the five hundred and seventy-four classes serving 7,951 mentally retarded students in the 1972-73 school year.³

In West Virginia, as with other states, the majority of mentally retarded classes has been for elementary age children. Only recently has any emphasis been placed on secondary programs. The present secondary programs follow both accepted patterns of integrated special classes and segregated special schools. The 1971-72 secondary programs included ninety classes which served 1,658 students.⁴ For the 1972-73 school year, there was one hundred and seventy-two classes serving 3,094 students. This was approximately


²Ibid.


twenty-eight percent of the state's mentally retarded programs.

The literature surveyed showed no reported study undertaken at the West Virginia (state) or county (local) level in determining the most appropriate administrative model for secondary programs. Additional statistics on West Virginia revealed that nineteen of the fifty-five counties had no secondary program and twenty additional counties contained two classes or less.¹

As a minimal amount of reported research has emerged nationally and no reported studies at the state level (West Virginia) in determining the most appropriate secondary model, it appears, then, that there exists a need to study both accepted models, that of the integrated special class and the segregated special school, in determining which has done a better job of preparing secondary mentally retarded students for post-school success.

By looking at the data from this study, it is intended to have the following impact:

1. Facilitating a re-evaluation of existing secondary mentally retarded programs in relation to socio-civic, economic, educational, and vocational needs.

¹Rbid.
2. Offering counties in the state without secondary services more data on existing models to use in implementing programs.

3. Providing evidence for a curriculum and instruction development study of secondary mentally retarded programs at the state level.

4. Offering an accountability report which is representative of the type of mentally retarded adults graduated by present programs.

Limitations of the Study

All the general limitations inherent in the use of instrumentation in survey research are recognized as being applicable to this study. These may include:

1. Establishing statistical significant relations between data does not demonstrate how the variables are related.

2. Statistics can only discover degrees of correlation greater than can be ascribed to chance, thus when significant differences are identified, it is necessary to determine which variables are causes and which are effects.

3. Surveys do not indicate whether relationships will hold true under different conditions because the data are a reflection of a particular relationship observed at a single point in time.\(^1\)

This study was limited to five counties in West Virginia. The sample was limited to available graduates

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\(^1\)Alan C. Filley and Robert J. House, Managerial Process and Organizational Behavior (Glenview: Scott Foresman and Company, 1969), pp. 43-45.
from three segregated schools and random graduates from integrated special classes within the counties involved with the study. The implications of this study was limited to time (1974), area (State of West Virginia), and group under study (educable mentally retarded as defined). Only the instruments presented and described in Chapter III were used to measure educational training, and sociocivic and economic status of the sample group.

DEFINITION OF TERMS

**Mental Retardation.** Mental retardation refers to significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period.\(^1\)

**Educable Mentally Retarded (EMR).** One who is usually judged to be unable to profit from the regular school program but does have some potential for academic development. The IQ range for this group usually falls between 50-75 as measured by an individual intelligence test.\(^2\)

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\(^2\)Rothstein, *op. cit.*, p. 163.
**Special Education.** Special education is the education of pupils who deviate so far physically, mentally, emotionally or socially from the relatively homogeneous group of so-called "normal" pupils, that the standard curriculum is not suitable for their educational needs.¹

**Special Classes.** Special classes are classes within a regular school setting which offer special education services.

**Special Schools.** Special schools are schools established for the purpose of caring for the educational needs of atypical children. (for example: West Virginia School for the Deaf and Blind.)

**Segregated Programs.** Segregated programs are programs of special education organized in a school specifically utilized for the education of the retarded.

**Self-contained-integrated.** Self-contained-integrated programs are special education services offered in a special class within a regular school.

**Status.** Status is the position of an individual in relation to others.

**Sociocivic Status.** Sociocivic status is the relative rank obtained by an individual, in relation to others within the sample, in adapting to his personal and cultural environment.\(^1\) For the purpose of this study, sociocivic status was determined by those characteristics listed in Appendix II.

**Economic Status.** Economic status is the relative rank obtained by an individual, in relation to others within the sample, in adapting to his occupational environment.\(^2\) For the purpose of this study, economic status was determined by those characteristics listed in Appendix I.

**Coping Ability Indices.** The coping ability indices is a numerical score which indicates an individual's status in relation to the scores of other individuals within the sample, with regard to his ability to overcome the problems and difficulties he encounters within his social and occupational environments.\(^3\)

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\(^2\) Ibid.

\(^3\) Ibid.
Employment Status. Employment status is the individual's working classification. He may be employed, unemployed, or not in the labor force.

A. Employed: Productive behavior directed toward the accomplishment of an end that contributes toward the development of self-worth and economy of the individual or his environment. A "contributor to society" is defined as an individual who is able to perform an act which is necessary and would have to be paid for if done by another individual. In this context, an individual able to care for his own personal needs should be considered employed.  

B. Unemployed: One who is unemployed is one who is unable to care for his personal needs. He may be unemployed for various reasons such as waiting to be called to work, looking for work, or finding no work available in his line of work in the community.

C. Not in the Labor Force: One not in the labor force is one who is engaged in his own home housework, in school, unable to work because of long term physical or mental illness, in institutions, and persons doing only incidental unpaid family work.  

Habilitation Personnel. Habilitation personnel are defined here as those persons in public school secondary programs providing part-time or full-time habilitation services to adolescent and young adult students who are

1Goldman, op. cit., p. 135.

handicapped or have special needs. Typically persons who provide these services are high school special education teachers, teacher coordinators, and/or work study coordinators.

**Vocational Education.** Vocational education is designed to facilitate a successful transition from school to employment. It is concerned with training for occupations that are classified as industrial, service, or trade. These occupations directly function in designing, producing, processing, assembling, maintaining, servicing or repairing of any product or commodity.

**Vocational Rehabilitation.** The West Virginia Division of Vocational Rehabilitation is a service-oriented agency designed to assist those who are disadvantaged for such reasons as physical or mental disability, advanced age, low educational attainment, ethnic or cultural factors associated with poverty. Their goal is providing those rehabilitation services necessary for each eligible individual to

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1Clark and Oliverson, *loc. cit.*

achieve employment consistent with his abilities and needs.

Hypotheses

The following hypotheses were formulated for testing in this study at the .05 level of significance:

Hypothesis 1. There is no significant difference in employment status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program.

Hypothesis 2. There is no significant difference in sociocivic status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program as indicated by their Sociocivic Coping Ability Indices.

Hypothesis 3. There is no significant difference in economic status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program as indicated by their Economic Coping Ability Indices.
Hypothesis 4. There is no significant difference in educational training between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program.

ORGANIZATION OF THE REMAINDER OF THE STUDY

A review of pertinent literature is presented in Chapter II. A description of the procedures and techniques utilized in the collection of data is included in Chapter III. All data collected will be discussed and illustrated in tabular form, and all discrete differences that appear in the study will be treated statistically in Chapter IV. Chapter V contains a summary, conclusions, and implications for further study. The Bibliography and materials used to obtain the data follow Chapter V.
CHAPTER II

REVIEW OF RELATED LITERATURE AND RESEARCH

The present study was undertaken to determine if the sociocivic, economic, educational, and employment status of those students who participated in a secondary segregated special school differ significantly at the .05 level from those students who participated in a secondary integrated self contained special class within a regular school. A review of the literature was compiled to determine supportive evidence of the need to research the sociocivic, economic, educational, and employment status of mentally retarded adults with respect for the two accepted models for delivery of services; that of the segregated special school and the integrated special class.

This review of the literature was divided into three sections: (1) adult adjustment; (2) self concept; and (3) secondary programs.

ADULT ADJUSTMENT OF THE MENTALLY RETARDED

Many post-school adjustment studies have been conducted
concerning the mentally retarded. Traditionally, adjustment has been considered "good" if the retarded adult is employed, has remained law abiding, and has not become dependent upon others for primary sustenance. Conversely, poor adjustment has been said to exist when the retarded person was not employed, depended upon others for primary sustenance, and exhibited a large number of legal offenses.

One of the classic studies in post-school adjustment was attributed to Baller (1936). After following up 206 subjects, the investigator concluded that when compared to the normal population the retarded were less likely to find employment and more likely to become involved in law violations and anti-social conduct. Baller's study population was later followed up by Charles, indicating that eighty-three percent of the group were employed and, further, that

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many tested dull normal rather than mentally retarded.

Kennedy's investigation dealt with 256 mentally retarded adults and 129 normal controls. The investigator found a larger number of the retarded subjects unemployed, unmarried, on relief, and with more law violations. It was hypothesized that social characteristics were not controlled as a variable in most studies and that significant differences between the two groups could be a direct result of sociocultural circumstances rather than the single factor of mental retardation.

Tizard, Litt, and O'Conner cited factors of stable homes, careful job placement, encouragement and aid during initial work stages, and luck in securing an adequate first job as the major contributions to successful adult adjustment in the retarded. One factor leading to adult failure was felt to be inadequate school preparation.

Phelps attempted to determine if there were any significance between what was known about mentally retarded

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1 Kirk and Weiner, op. cit., pp. 87-88.


students when in school and the quality of their adjustment after leaving school. It was theorized that good adjustment on the job depended upon attitude and personal habits, and that the schools were not preparing the retardates to achieve this adjustment. Phelps suggested that adult retardates are making a good adjustment, after leaving school, in spite of being denied educational opportunities.

A study, by Collman and Newlyn, cited fifty-two percent of failures in post-school work adjustment among the retarded as being due to defects of character. These were further broken down into unreliability, bad time-keeping, and taking time off from the job. Work success was attributed to efficiency, reliability on the job, and good time-keeping.

In an investigation of forty-five mentally retarded adults and forty-five adults of normal intelligence, Peterson and Smith sought to determine what deficiencies existed in

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the mentally retarded. Results indicated the mentally retarded were deficient in education, work, family, social and civic characteristics, and concluded that a well-planned educational program, with emphasis upon training in the deficient areas, was essential in preparing the retarded for community adjustment.

The relationship between employed and unemployed mentally handicapped males was reported by Warren. Correlation between cheerfulness, self-confidence, cooperation with superiors, cooperation with other employers, work understanding, and initiative were all significant at the .05 level of confidence for the employed group. Factors such as accepting criticism, being neat and clean, being on time, and carefulness with materials and equipment were not considered significant in distinguishing employed from unemployed males. Warren concluded that a definite difference existed between the two groups with the employed males exhibiting those characteristics employers attributed to the average worker.

Dinger found 274 of 333 former educable mentally

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2 Dinger, op. cit., p. 357.
retarded students in the work force; only twelve percent were unemployed. He attributed their success to the types of jobs they secured; those in the unskilled and semi-skilled areas. Dinger concluded that the importance of intelligence in the area of occupational and community adjustment is not viewed as the major criterion of job success, but is only one factor which helps along with desirable personal characteristics possessed by the retarded worker.

Kolstoe,\(^1\) in one study, attempted to compare status factors between employed and unemployed retarded males. Results indicated the employed group was superior to the unemployed group in physical, personal, social, and work characteristics. No significant difference was noted in academic achievement between the two groups or in urban and rural backgrounds on employment.

Cohen and Rusalem\(^2\) compared the occupational values

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of retarded students with those of their normal age-group peers. They concluded that no significant difference existed in occupational values between retarded and non-retarded girls, but significant differences did exist between retarded and non-retarded boys. This difference was surmised to be dependent upon passive role expectations for retarded boys in our society.

Jackson\(^1\) initiated a follow-up survey of 188 ex-pupils from five special schools for the mentally retarded in Scotland. A positive relationship between measured intelligence and employment was recorded in both male and female samples for the two-thirds of the group that was employed. The non-adjusted group, which constituted one-third of the total sample, failed to reach a satisfactory level of adjustment in open employment and tended to be less intelligent. All members of the study were from segregated special schools for the mentally retarded.

Oswald's\(^2\) follow-up study of mental retardates


employed by the federal government indicated that certain factors other than IQ test scores, grade level completed in school, or reading achievement operate to affect job success. The factors which have a significant relationship to job success are: capabilities of the retarded employees to take directions; how well they follow through on their tasks; and how well they pace their work.

Chafin, et. al. studied mentally retarded adults in 1967 and 1969. The purpose of the research was to determine the efficacy of the high school programs upon adult adjustment. The 1967 study involved sixty students, thirty (experimental group) from a work-study program and thirty (comparison group) from secondary special classes without benefit of work-study. A comparison of graduates revealed significant differences as ninety-two percent of the experimental group were employed as compared to sixty-eight percent of the comparison group.

The 1969 study followed up the same two groups of mentally retarded adults. The results showed a loss of

1Jerry D. Chafin, Charles Spellman, Edward Regan, and Roxana Davidson, "Two Follow-up Studies of Former Educable Mentally Retarded Students from the Kansas Work-Study Project." Exceptional Children, 37:735, 1971.

2Ibid., p. 737.
employment from ninety-two to eighty-three percent for the experimental group while the comparison group employment increased from sixty-eight to seventy-five percent virtually eliminating any employment differences between the two groups. The results did indicate that at least three-fourths of the educable mentally retarded are capable of some kind of employment.

Stephens\textsuperscript{1} assessed the post-school adjustment of 125 mentally retarded males from five different kinds of educational units in Texas. One group (control) had no special education vocational training while the remaining four groups (experimental) had vocational training as part of their special education program. The results favored the experimental groups as they possessed superior work habits, and had more desire to work. They excelled in job attendance, punctuality, and terminated jobs with more acceptable reasons. The author states the conclusions drawn from this study support her findings in an earlier study with Peck, 1968, which found that mentally retarded youth who pursued a program of special work training obtained a higher degree of

success than those who entered employment without a program of special work training.

Summary

Highlights of studies on adult adjustment of the mentally retarded suggest the following:

1. The majority of EMR adults have made an acceptable adjustment.¹

2. EMR adults have clustered at the semi-skilled and unskilled end of the occupational ladder.²

3. EMR adults were more successful when they had been specifically assisted through training, placement, and guidance.³

4. Those EMR's who spent longer in special classes were somewhat more successful in securing employment than those with less time in the program.⁴

5. EMR adults are more likely to become involved in law violations than their normal age-group peers.⁵

6. Intelligence in the area of occupational and community adjustment is not the major criterion of job success for EMR adults.⁶

¹Charles, op. cit., pp. 60-71; and Phelps, op. cit., p. 91.
²Dinger, op. cit., p. 358.
³Tizard, Litt, and O'Conner, op. cit., p. 571; Stephens, loc. cit; and Peterson and Smith, op. cit., p. 409.
⁴Kolstoe, op. cit., pp. 472-482.
⁵Kirk and Weiner, op. cit., p. 84; and Dinger, loc. cit.
⁶Department of Vocational Rehabilitation, op. cit., p. 8; and Dinger, op. cit., p. 359.
7. The type and scope of school programs offered EMR's seems to have significant effect upon their adult adjustment.\textsuperscript{1}

The above offer areas of concern for research. All studies cited have somewhat differing conclusions and recommends further research in post-school adjustment for the mentally retarded.

**SELF CONCEPT IN MENTALLY RETARDED INDIVIDUALS**

As defined by Sterlicht and Deutsch: "The self-concept may be thought of as the sum total of all the characteristics a person attributes to himself and the positive and negative values he attaches to these characteristics."\textsuperscript{2}

Many problems emerge in attempting to measure the self concept of retarded individuals. According to Knight,\textsuperscript{3} some of these are: (1) a lack of suitable measuring instruments; (2) validity of the inventories for the groups

\textsuperscript{1}Tizard, Litt, and O'Conner, loc. cit.; Collman and Newlyn, op. cit., p. 740; and Stephens, op. cit., p. 5.


studied; (3) the level of defensive behavior exhibited by the subjects; and (4) the truthfulness of self reports.

Kern and Pfaeffle¹ compared the social adjustment of mentally retarded children who were in integrated special classes within the regular school, attending a segregated special school, or were in regular classes. The subjects consisted of ninety-three EMR children, thirty-one from each of the three types of above programs. The California Test of Personality² was the instrument used to measure self concept; only the Social Adjustment section was administered. Results showed that the segregated special school children tended to have better social adjustment than either the integrated special class children or those remaining in the regular class with the latter showing the poorest overall adjustment. The major conclusions of this study were that mentally retarded children showed better adjustment when offered special school and special class educational


provisions.

Dunn cited the need for more relevant studies to be conducted on self concept in the retarded. He stated that one can only speculate on the self concept of these individuals as no research has been conclusive:

While more research is needed, we cannot ignore the evidence that removing a handicapped child from the regular grades for special education probably contributes significantly to his feelings of inferiority and problems of acceptance.¹

Meyerowitz² demonstrated that a group of EMR pupils increased in feelings of self derogation after only one year in special classes. Additionally, that children placed in special classes were less likely to adjust to neighborhood peer relationships than those left in the regular education program.

Welch³ looked at the effects of segregated and partially integrated schools on self concept of EMR's. Two

¹ Dunn, op. cit., p. 9.


groups of EMR children, one group assigned to a segregated (special class) condition, the other group assigned to a partially integrated condition (one-half day with other retarded children, the other half of the day in a regular classroom), were used in the study. The Illinois Index of Self Derogation\(^1\) was used in the study. Results were consistent with Meyerowitz's study in that the retarded segregated subjects made more derogatory statements about themselves while the partially integrated subjects showed a significant decrease in the number of derogatory statements about themselves. Children segregated on the basis of intellectual inferiority not only perform less adequately but more often see themselves as being inadequate and rejected.

Johnson\(^2\) compared the personal and social adjustments of EMR children placed in special classes with EMR children remaining in the regular classes. The Syracuse Scales of Social Relations,\(^3\) and the California Test of Personality\(^4\) were administered to both groups of subjects. Comparisons

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\(^1\)Meyerowitz, loc. cit.

\(^2\)Johnson and Blank, op. cit., pp. 59-60.

\(^3\)Buros, op. cit., pp. 186-189.

\(^4\)Buros, op. cit., pp. 73-74.
of personal and social adjustment as measured by the California Test of Personality showed no significant differences between special class retarded and regular class retarded children. As measured by the Syracuse Scale of Social Relations, special class children were found to be like the normal child in peer acceptance, but were significantly more acceptable by their peers than were retarded children in the regular grades.

Gozali attempted to determine the effects of special class placement upon the self concept of EMR students. He interviewed 218 male former EMR students as to their perception of the special class. Results indicated that the majority (eighty-five percent) of the individuals perceived their special class experiences as degrading and useless. It seemed that in the eyes of EMR students, special classes had failed to educate and provide them with a socialization support system.

Results reported by Warner, Thrapp, and Walsh indicated that sixty-one percent of 369 children in special

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classes liked being in a special class, and forty-one percent had no desire to be in some other class in their particular school. Younger children had a more favorable attitude toward their placement in special class, with fifty-three percent having a positive attitude. Positive attitude decreased to thirty-four percent at the junior high level and to eighteen percent at the senior high level.

Lawrence and Winschel\(^1\) stated that developmental information on the emergence of self concept in the mentally retarded was unavailable to date, and would remain that way until strong longitudinal studies were made. Additionally, that segregated placement patterns were not conducive to overall positive concepts of self and could not be justified on that basis alone.

Richmond and Dalton\(^2\) investigated eight classroom groups of EMR pupils to obtain self reports from them in three developmental areas - social, academic, and emotional; teacher ratings were also obtained in these three areas.


Results indicated that pupils ranking high in academic areas by their teachers had a significantly more positive self concept than those perceived by their teachers to be less proficient academically. In social self esteem, the EMR students did not perceive their self concept among peers to be significantly correlated to their academic standings; teacher evaluations of EMR social and emotional behaviors were not significantly related to student self ratings.

Summary

From the sample studies above, it was concluded that the status of research data on self concept in EMR children continues to be unsettled. The following trends appear from the studies cited:

1. No conclusive studies have been conducted that offer valid instruments in assessing the self concept of retarded individuals.\(^1\)

2. EMR students tend to increase in self derogation after a short time in special classes.\(^2\)

3. EMR students are less accepted in regular classes than in special classes and segregated special schools.\(^3\)

\(^1\)Knight, loc. cit., Lawrence and Winschel, loc. cit., and Dunn, loc. cit.

\(^2\)Meyerowitz, loc. cit., and Welch, loc. cit.

\(^3\)Johnson, loc. cit., and Kern and Pfaeffle, loc. cit.
4. Many former students of special classes viewed their placement as degrading and useless.\(^1\)

5. Positive self concepts have a significant relationship with high academic achievement.\(^2\)

SECONDARY PROGRAMS FOR EDUCABLE MENTALLY RETARDED STUDENTS

The issue of most efficacious school placement for EMR children has centered around whether the retarded are better placed in a regular class competing with normal children or whether they should be segregated in special classes or schools.

The placement controversy reached its zenith in the 1940's and 1950's, but still resides in most secondary programs today. The problem is not only one of better placement for EMR children, but involves finances such as special equipment, program development, and the employment of specially trained teachers if the special school or class route is taken.

Historically, administrators and special education personnel have contended that the special class has a definite advantage over the regular class in that it provides a

\(^1\)Gozali, loc. cit.

\(^2\)Richmond and Dalton, loc. cit.
less frustrating environment and a chance to compete with comparable peers. Yet, many studies have consistently offered evidence which shows that the special class is academically inferior to the regular class for EMR children.

The President's Committee on Mental Retardation expressed great concern over programs for the mentally retarded:

And school programs of education and training for the retarded should be flexible enough to develop good work skills and attitudes in the broad range of ability levels among the retarded who can benefit from school programs.... These programs should also continue up to the point at which the retarded individual moves into the job he will hold (no gap between training and work), with counseling assistance continuing as needed at least until the new worker is demonstrably adjusted to his working conditions, co-workers, and being on his own.¹

This concern had been expressed for a great number of years in determining both the placement and programs needed to best equip EMR students for future employment.

Howe² attempted to determine whether or not the following assumption was correct: that an EMR graduate whose program combined practical on-the-job training off campus


with related and reinforced curricula in the classroom will be better prepared to enter the world of work and succeed than will one whose program was limited to the school setting. His study population comprised sixty-eight former students with half from a work experience program which included part-time off campus placement and supervision on jobs in the community, and the remaining subjects from special classes in comparable high schools but providing no off campus work experiences. Results of the study indicated no significant differences between the two groups in terms of overall adjustment. Howe concluded that not all EMR students needed off campus work placement but further research in organization of secondary programs for EMR's was needed as the study group was from a metropolitan area of California in a time of high employment.

A study of reports in the literature seems to indicate problems in isolating both the instructional factors and the type of school program that will make the greatest contribution to the retarded student's vocational success. These problems are brought out by Sparks and Younie in the following:

1. A confusion of terminology exists making it impossible to build a cumulative picture of adult adjustment.
2. A potpourri of programming floods the literature with little or no large scale evidence that is based on a study of students from a quality program which has been carefully defined and consistently implemented for a number of years.

3. An overreliance on mental functioning has been created by schools rigidly grouping students on IQ. If any concrete evidence has evolved from studies, it has been that specific intelligence studies have little function in determining vocational adjustment.

4. A lack of extended programming has been relevant in that until very recently, the schools showed little interest in retaining EMR students beyond the minimum age for leaving school.¹

The critical question still remains however: "Where should the EMR student be placed for the most effective education and training?"

Dunn² questioned placement of EMR children in self contained special classes. He states that the primary groups are ethnically and/or economically disadvantaged children who have been labeled as EMR's. The study indicated that the homogenous grouping of special classes worked to the disadvantage of the slow learner and underprivileged


children. Dunn suggested "that self contained special classes will probably not be tolerated under present court rulings, but perhaps itinerant and resource room programs would be."¹

Cassidy and Stanton examined a number of studies comparing the academic achievement of EMR children from both regular and special class situations and concluded:

The significant differences obtained favoring the Regular Class Group indicate that in terms of academic materials they perform more adequately than do the members of the Special Class Group. Placement of the mentally retarded child in a regular classroom presumably means the greater emphasis is placed upon the individual's acquiring competency in reading, spelling, and arithmetic. Differences in the two types of academic settings picture the special classroom as being the more concerned with the overall personal development and growth of the child but lowest in the academic areas which are commonly developed within an educational framework.²

Barngrover³ examined educators' preferences in special education programs. The researcher interviewed fifty

¹Ibid., p. 77.


educators (teachers, administrators, and school psychologists) to determine if they felt that special classes for the mentally retarded child are presently able to fill his needs or if he would be better served by being returned to the more heterogeneous grouping of the regular classroom. Results indicated that twenty-seven of the fifty interviewees felt that the present program of providing special classes should be retained. Reasons given in support of this view included "it helps the teachers - gets the slow ones out." Other reasons cited less frustration and more success for the exceptional child, more individual attention, and more realistic preparation for the work world.

The most predominant reasons given by the twenty-three supporters who advocated placement in the regular classroom included greater stimulation for the special child in heterogeneous groupings, more good peer behavior models to emulate, higher expectations of progress in a regular class, and the failure of present special classes to meet special needs.

In a discussion of the literature, Cook\(^1\) states that the most obvious area of placement where most special

educators have chosen to ignore the child's best interests is that which is known as mainstreaming which had been researched for a number of years under the heading of efficacy studies. The study obtained data on the relative merits of special versus regular classes for the mentally retarded. The results were:

Those studies concerned with academic achievement used 5,665 pupils and extended over the past 12 years. The data were virtually unanimous in indicating that the higher level MR's (IQ 70+) benefited academically in the regular class. Studies on the social adjustment using 749 pupils and extending back 15 years yielded equivocal results overall.\(^1\)

Cook hypothesized that special educators should start mainstreaming more intensively or the courts and legislators would do it for them.

Bruininks and Rynders\(^2\) disagreed with Cook in that they felt that hasty attempts to abolish special school and class services seemed unwise and premature. Instead, they felt present programs for EMR children should be restructured to serve only those children who cannot remain in a regular classroom, even with specialized assistance.

\(^1\)Ibid.

Iano set the following position on placement of mentally retarded students:

...IQ is an inadequate basis for differentiating either educational methods or curricula. Children who are grouped together because they fall into the IQ range of 50/60 to 75/80 do not display common learning characteristics distinct from those of other children. Neither do they require educational goals and curricula during their elementary school years. Although, it is admitted that during the secondary school years special goals and curricula become appropriate for differing ability and interest groups, it is suggested that defining programs according to intelligence is at least a questionable practice....

Summary

Highlights of studies on secondary programs for the mentally retarded indicated:

1. School programs for the mentally retarded should continue up to the point at which the retarded individual moves into the job he will hold.

2. Further research in organization of secondary programs for EMR's is needed.

3. All secondary EMR students do not need the same type of program to become successful.

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2The President's Committee on Mental Retardation, loc. cit.

3Howe, loc. cit., Sparks and Younie, loc. cit., and Bruininks and Rynders, loc. cit.

4Bruininks and Rynders, loc. cit., and Howe, loc. cit.
4. Special class placement appears to be in danger from recent litigation cases. ¹

SUMMARY AND RATIONALE

This chapter has presented a review of related literature and research pertaining to the employment status of mentally retarded individuals, self concept in mentally retarded individuals, and secondary programs for the mentally retarded. The literature has indicated:

1. The majority of EMR adults have made an acceptable adjustment.

2. EMR's were found predominantly at the semi-skilled and unskilled end of the occupational ladder.

3. EMR adults were more successful when they had been specifically assisted through training, placement, and guidance.

4. No conclusive studies have been conducted in assessing the self concept of retarded individuals.

5. EMR students are generally more accepted in special classes or special schools than in regular classes, but tend to be academically inferior to EMR peers in regular classes.

6. Most research, to date, has not been conclusive in determining organization of programs or curriculum needs for secondary EMR students.

In analyzing the survey of the literature as it

¹Dunn, loc. cit., and Cook, loc. cit.
applies to the current study and viewing its summarization in light of the lack of secondary programs in West Virginia,¹ the apparent need for a comparison of present programs existed. Current research on West Virginia showed that only nineteen of fifty-five counties offered any special educational services to secondary age mentally retarded clients, and twenty additional counties were in the initial stages of program implementation. Both program models, segregated and integrated, are offered in the West Virginia mental retardation program with no research as to the best type of program that would develop a better adjusted individual who could become self-sufficient in the community.

¹West Virginia Department of Education, Educational Statistical Summary, loc. cit.
CHAPTER III

EXPERIMENTAL PROCEDURES EMPLOYED IN THE STUDY

THE PROBLEM AND HYPOTHESES TO BE TESTED

The Problem

This study was comprised of several questions: Does the segregated special school or the integrated special class better prepare students for sociocivic responsibility? Which model best prepares its graduates for post-school employment? How do students from the two models feel about themselves? What significant differences exist in educational training, between the two models, leading to a better adjusted adult?

Purpose of the Study. The purpose of this study was to determine the employment status of educable mentally retarded adults, either current graduates or those who had been out of school up to six years. In addition, this investigation will make the following comparisons: (1) the sociocivic
status of those who participated in segregated programs with those who participated in self contained integrated programs; (2) the economic status of those who participated in segregated programs with those who participated in self contained integrated programs; and (3) the type of curriculum that was offered the students from each of the programs.

**Delimitations of the Study.** The study was limited to five county school systems in West Virginia. The population for the study was restricted to fifty-one subjects - both male and female. Measurement instruments employed in the collection of data were restricted to the following indices: (1) Determination of Educational Program and Training; (2) Determination of Sociocivic Coping Ability Indices; and (3) Determination of Economic Coping Ability Indices.

**Limitations of the Study.** Several limitations were noted in the collection and analysis of data which may affect the findings in this study:

1. Five school systems in West Virginia were used for the study. Results can only be generalized to this group or to subjects living in areas of similar size and type.

2. The greater number of subjects in this study were males. Results of this study can therefore not necessarily be generalized to female subjects.
3. Factors other than educational training, employment, sociocivic and economic efficiency influence post-school adjustment. The investigator could not determine the significance of unknown factors which may have affected the results in unknown ways.

4. In dealing with dichotomous questions having "yes-no" responses, evidence for verifying the response is usually warranted. Approval of the subject's responses by a parent, spouse, or educator sufficed as evidence to validate the response.

5. The number of years spent in special class or school varied among subjects and between groups. This could influence the results in unknown ways.

**Hypotheses to be Tested**

The following hypotheses stated below in the null form were formulated for testing in this study at the .05 level of significance:

**Hypothesis 1**: There is no significant difference in employment status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program.

**Hypothesis 2**: There is no significant difference in sociocivic status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated program as indicated
by their Sociocivic Coping Ability Indices.

**Hypothesis 3:** There is no significant difference in economic status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program as indicated by their Economic Coping Ability Indices.

**Hypothesis 4:** There is no significant difference in educational training between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program.

**THE STUDY POPULATION**

**Selection of the Research Population**

Prior to the actual selection of the research population, permission, orally or in writing, was obtained from the respective county superintendents to conduct the research. A list was obtained, in each of the five counties, of students who met the following criteria:

1. Were currently completing or had graduated from a special education program in the counties selected within the last six years.
2. A minimum of one year in a special class or special school.

3. Availability of the students in terms of residence or work location.

4. Willingness to be included in the research.

The investigator obtained the lists of qualified students from schools within the systems. Selection of subjects was limited to the above.

The Interviewing Process

The following procedure was employed in gathering data. Once the available students were identified, personal interviews were conducted by the researcher with assistance from special education administrators, vocational rehabilitation counselors, and teachers. Each interviewer was provided with complete instructions in questionnaire administration as well as optional strategies to use when difficulty was encountered in completing items on the questionnaire.

Instrument Development

Instruments used in the research were developed and/or compiled by the investigator. Prior to the actual use of the instruments, professional special education personnel critiqued the content and format of the questionnaire and offered suggestions necessitating some modification. Since the
instruments were evaluated by personnel in the field of mental retardation, they were considered to have face validity.

Description of the Study Population

The study population consisted of two groups - those from segregated special schools and those from self contained integrated special classes. The segregated special school group represented one urban and two rural counties, and the latter group represented two rural counties. No urban sample was available for the integrated special classes. The total sample comprised fifty-one subjects, twenty-eight from segregated special schools and twenty-three from self contained integrated special classes. The segregated sample consisted of nineteen male and nine female subjects. The males differed in age from eighteen to twenty-four, and the females from eighteen to twenty-three. The above information is presented in Table I, page 55.

The self contained integrated sample consisted of fifteen male and eight female subjects. The males differed in age from nineteen to twenty-one, and the females from eighteen to twenty-two. The above information is presented in Table II, page 56.
TABLE I

FREQUENCY DISTRIBUTION OF SEGREGATED SUBJECTS
BY SEX AND CHRONOLOGICAL AGE

<table>
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<th>Age in years</th>
<th>Male</th>
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<th>Total</th>
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</thead>
<tbody>
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<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>19</td>
<td>3</td>
<td>1</td>
<td>4</td>
</tr>
<tr>
<td>20</td>
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<td>1</td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>19</td>
<td>9</td>
<td>28</td>
</tr>
</tbody>
</table>

The mean score for the segregated sample is 3.18, and the mean score for the integrated sample is 3.22. The grand mean for the total group is 3.20. It should be noted that eight subjects were eighteen years of age, five males and three females, while only two subjects were over twenty-two years of age, one male and one female. The majority of the total sample clustered in the twenty to twenty-one age
bracket. The sex and chronological age of the total sample is presented in Table III, page 57.

TABLE II

FREQUENCY DISTRIBUTION OF INTEGRATED SUBJECTS

BY SEX AND CHRONOLOGICAL AGE

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>2</td>
<td>2</td>
</tr>
<tr>
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<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
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<td>3</td>
<td>10</td>
</tr>
<tr>
<td>22</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>15</td>
<td>8</td>
<td>23</td>
</tr>
</tbody>
</table>

The number of years spent in special education was determined by data collected from the subjects and confirmed by information contained on the permanent record card of each subject. Each student had spent at least one year in special class or special school. The number of years spent in special class or special school for each subject is presented in Table IV, page 58.
TABLE III
FREQUENCY DISTRIBUTION OF THE TOTAL SAMPLE
BY SEX AND CHRONOLOGICAL AGE

<table>
<thead>
<tr>
<th>Age in years</th>
<th>Male</th>
<th>Female</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>18</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>19</td>
<td>4</td>
<td>2</td>
<td>6</td>
</tr>
<tr>
<td>20</td>
<td>11</td>
<td>2</td>
<td>13</td>
</tr>
<tr>
<td>21</td>
<td>12</td>
<td>6</td>
<td>18</td>
</tr>
<tr>
<td>22</td>
<td>1</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>23</td>
<td>0</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>24</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Total</td>
<td>34</td>
<td>17</td>
<td>51</td>
</tr>
</tbody>
</table>

The mean score for the segregated males is 6.11 and for the segregated females 7.22. The total segregated mean is 6.46. The mean score for the integrated males is 6.67 and for the integrated females 6.83. The total integrated mean is 6.72. The grand mean for the total sample is 6.58. Both groups, segregated and integrated, were in a special education program over half their total years in school (this assumption is based on school programs of 12 years).
TABLE IV
FREQUENCY DISTRIBUTION OF SUBJECTS BY NUMBER OF YEARS SPENT IN SPECIAL CLASS OR SPECIAL SCHOOL

<table>
<thead>
<tr>
<th>Number of Years in Special Class or Special School</th>
<th>Segregated Males</th>
<th>Segregated Females</th>
<th>Integrated Males</th>
<th>Integrated Females</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>4</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>5</td>
<td>1</td>
<td>0</td>
<td>3</td>
<td>1</td>
<td>5</td>
</tr>
<tr>
<td>6</td>
<td>6</td>
<td>1</td>
<td>7</td>
<td>3</td>
<td>17</td>
</tr>
<tr>
<td>7</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>8</td>
<td>1</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>9</td>
<td>1</td>
<td>1</td>
<td>3</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>10</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>11</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>12</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>4</td>
</tr>
<tr>
<td>Mean</td>
<td>6.11</td>
<td>7.22</td>
<td>6.67</td>
<td>6.63</td>
<td>6.56</td>
</tr>
<tr>
<td></td>
<td>6.47</td>
<td></td>
<td>6.66</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The marital status and subjects with children in the total sample is depicted in Table V, below.

**TABLE V**

**MARITAL STATUS AND SUBJECTS WITH CHILDREN IN THE TOTAL SAMPLE**

<table>
<thead>
<tr>
<th></th>
<th>Segregated</th>
<th>Integrated</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>20</td>
<td>17</td>
<td>37</td>
</tr>
<tr>
<td>Married</td>
<td>7</td>
<td>7</td>
<td>14</td>
</tr>
<tr>
<td>Divorced</td>
<td>1</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Subjects with</td>
<td>5</td>
<td>3</td>
<td>8</td>
</tr>
<tr>
<td>Children</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Research Instruments and Techniques Used**

The study was concerned with employment, sociocivic and economic status, and educational training of educable mentally retarded adults from two types of special education placement - segregated and integrated.

The following instruments were used in obtaining data for the study:

1. Determination of Economic Coping Ability Indices (Appendix I).
2. Determination of Sociocivic Coping Ability Indices (Appendix II).
3. Determination of Educational Program and Training of Secondary Age Mentally Retarded Adults (Appendix III).

4. School Information Sheet (Appendix IV).

Duration of Time for the Investigation

The time involved in this study was the Winter and Spring Quarter of 1973-74. All interviews were administered, individually, by the researcher and ancillary personnel.

Analysis of the Data

The Kuder-Richardson 20 formula\(^1\) was used to determine homogeneity of items making up the questionnaire (Appendix V). This formula requires only a single administration of an examination to determine test reliability. The Kuder-Richardson 20 formula is:

\[
KR_{20} = \frac{N}{N-1} \cdot \frac{s^2 - \overline{pq}}{s^2}
\]

\(N\) = Number of items on the examination
\(s^2\) = Variance of the scores squared
\(p\) = Proportion of the subjects responding correctly to each item
\(q\) = Proportion of subjects responding incorrectly to each item.

A number of items from the questionnaire were considered to index the underlying dimensions of employment status, sociocivic and economic coping ability, and educational training. These items were then subjected to an item-analysis. A priori assigned weights allowed a weighing scheme which optimized the internal consistency of the questionnaire. The weights so obtained for each item were then used to obtain a total score on the questionnaire. The scores provided information for selection of items used in the analysis of data.

The t-test statistical procedure was then applied to determine significance of difference between the groups studied in employment, sociocivic and economic status, and educational training. The .05 level of confidence was used as the criteria for statistical significance.

An analysis of results obtained in this study is presented in Chapter IV.
CHAPTER IV

ANALYSIS OF DATA

The purpose of this study was to compare the employment, sociocivic, and economic status of educable mentally retarded adults from a segregated school with those from an integrated special education class in a regular high school. In addition, this study will compare the educational training of adults from both administrative models in determining which model was most conducive to employment. Personal interviews were conducted using instruments developed by the investigator in comparing the two groups. Results of these interviews were analyzed in terms of differences and relationships between the mean scores of the two groups.

Four hypotheses were formulated and tested. The .05 level of confidence was used as the criterion for statistical significance. The t-test of statistical procedure was employed to determine the significance of difference between group means. All t's were rounded to the second decimal place in order to correspond to Garrett's \(^1\) "Table of t for use in determining the significance of statistics."

Examination of the Hypotheses

Each hypothesis has been restated and the data collected presented in a combination of tabular and narrative form. Hypotheses are stated in the null form.

Hypothesis 1 stated that "There is no significant difference in employment status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program."

This null hypothesis was formulated for testing at the .05 level of confidence. Present employment status and the number of full time jobs were the major criteria for determining significance between the two groups. The difference between present employment mean scores for the segregated and integrated subjects is contained in Table VI, page 64.

The mean present employment score for the segregated group is 4.61 and the mean present employment score for the integrated group is 3.61. The t score obtained is 1.66. This is less than the 2.01 which is required for significance at the .05 level of confidence. There is no difference in present employment for the segregated group as compared to the integrated group. Therefore, the decision was made to retain the null hypothesis.

In the number of full time jobs, an examination of the
### TABLE VI

**A COMPARISON OF PRESENT EMPLOYMENT STATUS FOR SEGREGATED AND INTEGRATED EDUCABLE MENTALLY RETARDED ADULTS**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Present Employment mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>28</td>
<td>4.61</td>
<td>1.66</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>3.61</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.01 \text{ @ .05 level of significance} \]

\[ df = 49 \]

\[ sS = 5.26 \]

\[ sI = 4.09 \]

\[ *R PBIS = .474 \]

\[ 2.01 \text{ is greater than } 1.66 \]

**Decision:** Retain \( H_0: M_1 - M_2 = 0 \) (for total sample on present employment)

---

*Item to total instrument

data revealed the segregated group had a total of twenty full time jobs with fifteen individuals having one full time job since graduation, four working at their second full time job, and one having worked at four full time jobs. The integrated group had a total of sixteen full time jobs with eleven individuals maintaining one full time job since graduation, four working at their second full time job and one having worked at three full time jobs. Table VII, page 65, illustrates
the significance of the relationship between mean scores of graduates from the two educational models as determined by the t-test of the significance of difference between means.

**TABLE VII**

A COMPARISON OF FULL TIME EMPLOYMENT MEAN SCORES

FOR SEGREGATED AND INTEGRATED GROUPS OF EDUCABLE MENTALLY RETARDED ADULTS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Full time employment mean scores</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>26</td>
<td>3.81</td>
<td>.59</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>3.52</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 \ @ \ .05 \text{ level of significance} \]

\[ df = 47 \]

\[ SS = 4.23 \quad sI = 4.02 \quad *RPBIS = .800 \]

2.02 is greater than .59

Decision: Retain \( H_0: M_1 - M_2 = 0 \) (for total sample in full time employment)

*Item to total instrument

The mean number of full time jobs of the segregated group is 3.81 and the mean number of full time jobs of the integrated group is 3.52. The t score obtained is .59. This is less than the 2.02 which is required for significance
at the .05 level of confidence. There is no difference in the number of full time jobs for the segregated group as compared to the integrated group. Therefore, the decision was made to retain the null hypothesis.

The data collected illustrated that a greater number of the segregated group obtained employment prior to graduation when compared with the integrated group. Twelve of the segregated group were employed prior to graduation while three of the integrated group were thus employed. This information is illustrated in Table VIII, page 67.

The mean employment rate prior to graduation for the segregated group is 2.12 as compared to 1.50 for the integrated group. The t score obtained is 2.38. This is more than the 2.02 required for significance at the .05 level of confidence. There is a difference in employment rate prior to graduation between the segregated group and the integrated group. Therefore, the decision was made to reject the null hypothesis and accept an alternate hypothesis.

No significant differences in employment status were found between the segregated and integrated subjects in the study for current employment and number of full time jobs. A difference was noted at the .05 level of significance for employment rate between the two groups.
Table VIII
A Comparison of Employment Rate Between Segregated and Integrated Educable Mentally Retarded Adults

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Employment Rate mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>25</td>
<td>2.12</td>
<td>2.38</td>
<td>.05</td>
</tr>
<tr>
<td>Integrated</td>
<td>20</td>
<td>1.50</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 \text{ @ } .05 \text{ level of significance} \]
\[ df = 43 \]
\[ sS = 2.35 \]
\[ sI = 1.72 \]
\[ *RPBIS = .648 \]

2.38 is greater than 2.02

Decision: Reject \( H_0: M_1 - M_2 = 0 \) (for employment rate between the two groups)
Retain \( H_1: M_1 - M_2 = 0 \)

*Item to total instrument

The hypothesis was concerned with employment status as a whole. Therefore, the null hypothesis which states "There is no significant difference in employment status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program" was retained. Employment status is not significantly different between the
two groups.

The data presented above would suggest the possibility that data from a much larger sample, or in replications of this study, might reveal a significant difference does exist in employment status (as measured by the instruments used in this study) between graduates of a segregated special school and those from an integrated special class within a regular high school.

However, no significant differences were reported by Banks\(^1\) between employment status and educable mentally retarded subjects from segregated and self contained integrated programs.

**Hypothesis 2** stated that "There is no significant difference in sociocivic status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program as indicated by their Sociocivic Coping Ability Indices."

This null hypothesis was formulated for testing at the .05 level of confidence. Table IX, page 69, illustrates the significance of difference between mean scores in number of close friends of graduates from the two types of secondary programs as determined by the t-test of the significance of

\(^{1}\text{Banks, op. cit., p. 34}\)
difference between means. A mean score of 1.59 was obtained for the segregated sample and a mean score of 1.57 was obtained for the integrated sample; the t score of .08 is less than the t of 2.02 required for significance at the .05 level.

**TABLE IX**

**A COMPARISON OF NUMBER OF CLOSE FRIENDS BETWEEN SEGREGATED AND INTEGRATED MENTALLY RETARDED ADULTS**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Number of close friends mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>27</td>
<td>1.59</td>
<td>.08</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>22</td>
<td>1.57</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 \at \ .05 \text{ level of significance} \]
\[ \text{df} = 47 \]
\[ s_{S} = 1.87 \]
\[ s_{I} = 1.76 \]
\[ \ast \text{RPBIS} = .328 \]

.08 is less than 2.02

Decision: Retain \( H_{0}: M_{1} - M_{2} = 0 \) (for number of close friends)

*Item to total instrument

In observing favorite free time activities, the mean score of the segregated group is 3.29 and the mean score of the integrated group is 4.17. The t score obtained is -2.58
which is greater than the 2.02 needed for significance at the .05 level. This information is reported in Table X, below.

**TABLE X**

A COMPARISON OF FAVORITE FREE TIME ACTIVITIES

BETWEEN SEGREGATED AND INTEGRATED

MENTALLY RETARDED ADULTS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Free time activities mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>28</td>
<td>3.29</td>
<td>-2.58</td>
<td>.05</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>4.17</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\( t = 2.02 \) @ .05 level of significance

\[ sS = 3.49 \]

\[ sI = 4.48 \]

\[ *\text{RPBIS} = -.298 \]

-2.58 is greater than 2.02

Decision: Reject \( H_0: M_1 - M_2 = 0 \) (for free time activities between the two groups)

Retain \( H_1: M_1 - M_2 = 0 \) the two groups

*Item to total instrument

In use of community facilities, Table XI, page 71, illustrates the significance of the relationship between mean scores of the educable mentally retarded graduates from the two types of secondary school placement as determined by the
t-test of the significance of difference between means. The mean score of the segregated group is 1.12 and the mean score of the integrated group is 1.30. The obtained t is -1.64 which is less than the 2.02 which is required at the .05 level of significance.

**TABLE XI**

A COMPARISON OF USE OF COMMUNITY FACILITIES BETWEEN SEGREGATED AND INTEGRATED EDUCABLE MENTALLY RETARDED ADULTS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Use of community facilities mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>26</td>
<td>1.12</td>
<td>-1.64</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>1.30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 \text{ @ .05 level of significance} \]

\[ \text{df} = 47 \]

\[ ss = 1.18 \]

\[ si = 1.41 \]

\[ * \text{RBPIS} = .253 \]

-1.64 is less than 2.02

Decision: Retain \( H_0: M_1 - M_2 = 0 \) (for use of community facilities between the two groups)

*Item to total instrument

Data concerning the total sample attitudes toward adult sociocivic responsibilities was tabulated. The mean
score of the segregated sample toward adult sociocivic responsibilities is 1.89 and the mean score of the integrated sample toward adult sociocivic responsibilities is 1.83. The t score of .67 is less than that required for significance at the .05 level. Table XII, below, illustrates the difference between mean scores.

**TABLE XII**

**A COMPARISON OF ATTITUDES TOWARD ADULT SOCIOCIVIC RESPONSIBILITIES BETWEEN SEGREGATED AND INTEGRATED MENTALLY RETARDED ADULTS**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Sociocivic responsibilities</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>27</td>
<td>1.89</td>
<td>.67</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>1.83</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 \text{ at } .05 \text{ level of significance} \]

\[ \text{df} = 48 \]

\[ \text{ss} = 1.95 \]

\[ \text{sI} = 1.91 \]

\[ *\text{RPBIS} = .607 \]

.67 is less than 2.02

Decision: Retain \( H_0: M_1 - M_2 = 0 \) (for total sample in attitudes toward adult sociocivic responsibilities)

*Item to total instrument*
No significant differences in sociocivic coping ability were found between the segregated and integrated subjects in this study for all indices used from the Sociocivic Coping Ability Indices except for free time activities. The hypothesis was concerned with sociocivic coping ability as a whole. Therefore, the decision was made to retain the null hypothesis for sociocivic coping ability between the two groups. There is no significant difference between segregated and integrated educable mentally retarded adults in sociocivic coping ability.

The data presented would suggest the possibility that data from much larger sample might reveal that a significant difference does in fact exist between the two groups in sociocivic coping ability. However, Banks did not find any significant relationship between the sociocivic coping ability of subjects from segregated and self-contained integrated special education programs.

Hypothesis 3 states that "There is no significant difference in economic status between secondary age mentally retarded adults from a segregated special education program and those who were in a self-contained integrated special education program as indicated by their Economic Coping Ability Indices."

\footnote{\textit{Ibid.}}
This null hypothesis was formulated for testing at the .05 level of significance. Table XIII, below, illustrates the significance of the relationship between mean scores for monthly take home pay of adults from the two types of secondary school programs as determined by the t-test of the significance of difference between means.

### TABLE XIII

A COMPARISON OF MONTHLY TAKE HOME PAY BETWEEN SEGREGATED AND INTEGRATED MENTALLY RETARDED ADULTS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Take home pay mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>21</td>
<td>3.19</td>
<td>.51</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>3.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 \oplus .05 \text{ level of significance} \]

\[ df= 42 \]

\[ ss = 3.40 \]
\[ si = 3.31 \]
\[ *\text{RPBIS} = .469 \]

.51 is less than 2.02

Decision: Retain \( H_0: \ M_1 - M_2 = 0 \) (for take home pay between the two groups)

*Item to total instrument

The mean score of take home pay for the segregated
group is 3.19 and the mean score of the integrated group is 3.0. The obtained $t$ of .51 is less than 2.02 which is required for significance at the .05 level. No significant difference was noted in take home pay between the two groups.

The difference between source of income for the segregated and integrated groups is illustrated in Table XIV, below.

**TABLE XIV**

**A COMPARISON OF SOURCE OF INCOME BETWEEN SEGREGATED AND INTEGRATED MENTALLY RETARDED ADULTS**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Source of income mean</th>
<th>Obtained $t$</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>28</td>
<td>6.5</td>
<td>1.56</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>25</td>
<td>6.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$t = 2.01 @ .05$ level of significance

$sS = 6.67$

$sI = 6.28$

*RPBIS = .691

1.56 is less than 2.01

Decision: Retain $H_0: \mu_1 - \mu_2 = 0$ (for source of income between the two groups)

*Item to total instrument

The mean score of source of income for the segregated group is 6.5 and the mean score for the integrated group is
6.0. The t score obtained is 1.56 which is less than the 2.01 needed for significance at the .05 level. There is no significant difference in source of income between the two groups.

The data obtained on the economic index "do you save money" is reported in Table XV, below. Saving money was considered desirable for twenty segregated subjects and eleven integrated subjects. Nineteen subjects in the total sample did not save money.

### TABLE XV

**A COMPARISON OF SAVINGS' ACCOUNTS BETWEEN SEGREGATED AND INTEGRATED EDUCABLE MENTALLY RETARDED ADULTS**

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Savings' accounts mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>27</td>
<td>1.74</td>
<td>2.08</td>
<td>.05</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>1.47</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[
\begin{align*}
t &= 2.02 @ .05 \text{ level of significance} \\
df &= 48 \\
sS &= 1.83 \\
sI &= 1.60 \\
*RPBIS &= .447
\end{align*}
\]

2.08 is greater than 2.02

**Decision:** Reject \( H_0: M_1 - M_2 = 0 \) (for savings' accounts between the two groups) Retain \( H_1: M_1 - M_2 = 0 \)

*Item to total instrument*
As revealed by Table XV, page 76, the mean score of the segregated group on savings' accounts is 1.74 and the mean score of the integrated group is 1.47. The obtained t is 2.08 which is greater than the 2.02 needed for significance at the .05 level of confidence. There is a significant difference in the number of savings' accounts between graduates of a segregated special school and those from an integrated special education class within a regular high school.

In the number of cars owned by subjects in the sample, an examination of the data revealed the segregated group owned nine cars and the integrated group owned ten cars. Twenty subjects of the segregated group and thirteen subjects of the integrated group depended upon other methods of transportation. Table XVI, page 78, illustrates the significance of the relationship between mean scores of graduates from the two educational models as determined by the t-test of the significance of difference between means.

The mean score for the number of cars owned by the segregated group is 1.32 and the mean score for the number of cars owned by the integrated group is 1.43. The t score of -.79 is less than that required for significance at the .05 level. There is no significant difference in the number of cars owned by the two groups.
TABLE XVI
A COMPARISON OF THE NUMBER OF CARS OWNED
BETWEEN SEGREGATED AND INTEGRATED
MENTALLY RETARDED ADULTS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Number of cars mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>28</td>
<td>1.32</td>
<td>-.79</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>1.43</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

t = 2.01 @ .05 level of significance

\[ \text{df} = 49 \]

\[ s_s = 1.42 \]

\[ s_I = 1.55 \]

\[ *RBPIS = 4.34 \]

\[ -.79 \text{ is less than } 2.01 \]

Decision: Retain \( H_0: M_1 - M_2 = 0 \) (for the number of cars owned between the two groups)

*Item to total instrument

No significant differences in economic coping ability were found between the segregated and integrated subjects in the study for all indices used from the Economic Coping Ability Indices except for savings' accounts. The hypothesis was concerned with economic coping ability as a whole. Therefore, the decision was made to retain the null hypothesis for economic coping ability between the two groups. There is no significant difference between segregated and integrated
educable mentally retarded adults in economic coping ability.

As stated previously the data presented would suggest the possibility that data from a much larger sample might reveal that a significant difference does in fact exist between the two groups in economic coping ability. However, Chafin, et. al.\(^1\) did not find any significant differences between the two groups. Banks\(^2\) concurs in that he did not find any significant relationship between the economic coping ability of subjects from segregated and self contained integrated special education programs.

_**Hypothesis 4**_ states "There is no significant difference in educational training between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program."

This null hypothesis was formulated for testing at the .05 level of confidence. Table XVII, page 80, illustrates the significance of difference between mean scores in number of years spent in special class or special school of graduates from the two of secondary programs as determined by the _t_-test of the significance of difference between means.

\(^1\)Chafin, et. al., _loc. cit._

\(^2\)Banks, _loc. cit._
TABLE XVII
A COMPARISON OF NUMBER OF YEARS SPENT IN SPECIAL EDUCATION BETWEEN SEGREGATED AND INTEGRATED MENTALLY RETARDED ADULTS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Number of years mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>28</td>
<td>6.46</td>
<td>-.38</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>6.72</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

$t = 2.01 @ .05$ level of significance

$ss = 7.54$

$sI = 7.01$

*RPBIS = .023

-.38 is less than 2.01

Decision: Retain $H_0: M_1 - M_2 = 0$ (for difference in number of years spent in special education)

*Item to total instrument

The mean score for the segregated group in number of years in special education is 6.46 and the mean number of years for the integrated group in special education is 6.72. The t score obtained is -.38 which is less than that needed for significance at the .05 level of confidence. There is no significant difference in number of years spent in special education between the segregated and integrated groups under study.
The difference between the segregated and integrated group as to how school helped in applying for a job is shown in Table XVIII, below.

**TABLE XVIII**

A COMPARISON BETWEEN SEGREGATED AND INTEGRATED EDUCABLE MENTALLY RETARDED ADULTS AS TO HOW SCHOOL HELPED IN APPLYING FOR A JOB

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Applying for a job mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>28</td>
<td>3.25</td>
<td>-1.85</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>3.70</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 \at \ .05 \text{ level of significance} \]

\[ \text{df} = 49 \]

\[ sS = 3.47 \]

\[ sI = 3.82 \]

\[ *\text{RPBIS} = .650 \]

\[ -1.85 \text{ is less than } 2.02 \]

Decision: Retain \( H_0: M_1 - M_2 = 0 \) (for group differences in how school helped in applying for a job)

*Item to total instrument*

The mean applying for a job score for the segregated group is 3.25 and the mean applying for a job score for the integrated group is 3.70. The \( t \) score obtained is -1.85.
This is less than the 2.02 which is required for significance at the .05 level of confidence. There is no significant difference in data between the segregated and integrated group as to how school helped in applying for a job.

The difference in mean score for the segregated and integrated groups in being trained for a specific job is shown in Table XIX, below.

TABLE XIX

A COMPARISON BETWEEN SEGREGATED AND INTEGRATED MENTALLY RETARDED ADULTS AS TO HOW SCHOOL HELPED IN BEING TRAINED FOR A SPECIFIC JOB

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Specific job mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>27</td>
<td>3.11</td>
<td>-2.25</td>
<td>.05</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>3.56</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.01 \text{ @ .05 level of significance} \]
\[ df = 48 \]

-2.25 is greater than 2.01

Decision: Reject \( H_0: M_1 - M_2 = 0 \) (for difference between the two groups in school training for a specific job)  
Retain \( H_1: M_1 - M_2 = 0 \)

*Item to total instrument
The mean score in school training for a specific job for the segregated group is 3.11 and the mean score in school training for a specific job for the integrated group is 3.56. The t score obtained is -2.25 which is significant at the .05 level. There is a significant difference in school training for a specific job between the two groups.

In teaching good work habits, the mean score of difference between the segregated and integrated groups is shown in Table XX, below.

**TABLE XX**

A COMPARISON BETWEEN SEGREGATED AND INTEGRATED MENTALLY RETARDED ADULTS AS TO HOW SCHOOL HELPED IN BEING TRAINED FOR GOOD WORK HABITS

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Good work habits mean</th>
<th>Obtained t</th>
<th>Level of significance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Segregated</td>
<td>26</td>
<td>3.42</td>
<td>-1.68</td>
<td>N.S.</td>
</tr>
<tr>
<td>Integrated</td>
<td>23</td>
<td>3.74</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

\[ t = 2.02 @ .05 \text{ level of significance} \]

\[ \text{df} = 47 \]

\[ s_S = 3.58 \]

\[ s_I = 3.85 \]

\[ *\text{RPBIS} = .508 \]

\[ -1.68 \text{ is less than 2.02} \]

Decision: Retain \( H_0: M_1 - M_2 = 0 \) (for school training in good work habits between the two groups)

*Item to total instrument*
The mean school training for good work habits score for the segregated group is 3.42 and the mean school training for good work habits score for the integrated group is 3.74. The t score obtained is -1.68 which is less than that needed for significance at the .05 level. There is no significant difference between segregated and integrated educable mentally retarded adults in school training for good work habits.

No significant differences in educational training leading to employment were found between the segregated and integrated subjects with the exception of school training for a specific job. The hypothesis was concerned with educational training as a whole. Therefore, the null hypothesis was retained. Educational training is not significantly different between the two groups.
CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

FOR FURTHER STUDY

The problem of providing adequate services in public school for secondary educable mentally retarded students has become increasingly more apparent during the past few years. Research to determine the effectiveness of special class and special school placement has been scant, and findings contradictory.

As yet, there is no conclusive evidence that segregated special schools or integrated special education classes are the best arrangement for mentally handicapped children. However, special education programs have increased rapidly for somewhat over sixty years. Just as a controversy exists concerning efficacy of special education, educators are now beginning to concern themselves with the advantages and disadvantages of secondary school placement for educable mentally retarded children.

The purpose of this study was to determine the employment status, sociocivic and economic coping ability, and educational training of educable mentally retarded adults who have been out of school up to six years.
A review of the literature revealed minimal research which compared the results of segregated school placement with those of self contained integrated placement. However, several investigations were found which reported that little if any difference was found between segregated and integrated school graduates. One important finding of the literature review was that the majority of educable mentally retarded adults have made a successful adjustment.

SUMMARY

The problem of this investigation was comprised of several questions. Does the segregated special school or the integrated special class better prepare students for sociocivic responsibility? Which model best prepares its graduates for post-school employment? How do students from the two different models feel about themselves? What effect does segregation from their normal age-peers have on the self concept of the mentally retarded? This study does not propose to answer all these questions, but does hope to contribute to a better understanding of the problem.

Instruments used in the research were developed and/or compiled by the investigator. Data was accumulated in four areas: employment status; sociocivic coping ability; economic coping ability; and educational training.
The study population consisted of two groups - those from segregated special schools and those from self contained integrated special classes. The total sample was comprised of fifty-one subjects, twenty-eight (nineteen male and nine female) from segregated special schools, and twenty-three (fifteen male and eight female) from integrated special classes.

The t-test statistical procedure was applied to determine the significance of differences between mean scores of the groups in employment status, sociocivic and economic coping ability, and educational training.

Four hypotheses were formulated for testing at the .05 level of significance. Each of these is restated in the null form and the findings relevant to this study are discussed below.

**Hypothesis 1:** There is no significant difference in employment status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program.

This hypothesis was based on research that the type and scope of school programs offered educable mentally retarded adults seems to have significant effect upon their adult adjustment.
Statistical treatment by the t-test supported the null hypothesis. A significant difference was found between segregated and integrated groups in rate of employment. No significant relationships were found for either group as a whole in employment status. This null hypothesis was retained.

**Hypothesis 2:** There is no significant difference in sociocivic coping ability between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program as indicated by their Sociocivic Coping Ability Indices.

This null hypothesis was supported by the t-test of significance. A significant difference was found between segregated and integrated groups in favorite free time activities. Significant relationships were not found for either group as a whole. This null hypothesis was retained.

**Hypothesis 3:** There is no significant difference in economic status between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program as indicated by their Economic Coping Ability Indices.

A significant difference was found between segregated and integrated groups in the number of savings' accounts. Significant relationships were not found for either group as a whole in economic coping ability. This null hypothesis
Hypothesis 4: There is no significant difference in educational training between secondary age mentally retarded adults from a segregated special education program and those who were in a self contained integrated special education program.

A significant difference was found between segregated and integrated groups in school training for a specific job. Significant relationships were not found for the groups as a whole in educational training. This hypothesis was retained.

CONCLUSIONS

Results for the population of this study, as a whole, were not significant. All four of the null hypotheses were retained. The following conclusions were drawn from the data obtained in this study:

1. There is no difference between employment status of educable mentally retarded graduates from segregated special schools and those from integrated special classes.

2. There is no difference between sociocivic coping ability (as determined by the instruments used) of educable mentally retarded adults from the two types of secondary school programs.

3. There is no difference between economic coping ability of educable mentally retarded adults who graduated from the two different types of secondary school programs.
4. There is no difference in educational training of educable mentally retarded adults in this study.

It can be concluded that type of environmental program, segregated versus integrated self contained, did not affect either the employment status, sociocivic and economic coping abilities, or the educational training of the educable mentally retarded adult.

Possible explanations for the non-significant results obtained in this study are suggested as follows:

1. The instruments used to measure data, in this study, may have lacked the sensitivity to detect significant differences or relationships for the population under study.

2. Variables other than those considered in this study may be responsible determinants of employment status, sociocivic and economic coping abilities, and educational training.

RECOMMENDATIONS FOR FURTHER STUDY

Some research implications are suggested as a result of this study:

1. Further research in determining the best environmental program, segregated versus integrated self contained, for secondary educable mentally retarded adults is needed.

2. Future research might include studies that seek the most responsive determinants in analyzing adjustment of mentally retarded adults.
APPENDICES
APPENDIX I

ITEMS FROM QUESTIONNAIRE INCLUDED IN DETERMINATION
OF ECONOMIC COPING ABILITY INDICES

Instruction:

Questions are arranged so they may be asked directly by interviewer. Check or circle only one answer unless otherwise noted.

1. Where do you live?
   1. Private home
   2. Apartment
   3. Trailer
   4. Residential facility (Public or private)
   5. Other

2. With whom are you living now?
   1. Parents
   2. Spouse
   3. Spouse and parents
   4. Other relatives
   5. Friends
   6. Alone

3. Do you own a car?
   1. Yes
   2. No

4. Do you have car insurance?
   1. Yes
   2. No

5. What training have you had since leaving school? (More than one answer may be circled)
   1. No training
   2. Vocational training
   3. Adult education
   4. Technical school
   5. Beauty school
   6. Nursing School
   7. Armed forces
   8. Sheltered workshops
   9. Private training center
   10. On-the-job training
6. Did you apply for any jobs?
   1. Yes
   2. No

7. Where does your money come from?
   1. My job
   2. Parents
   3. Husband/wife
   4. Friends
   5. Welfare payments
   6. Don't know
   7. Other

8. How long did it take you to get a job? (in weeks)
   1. 0-3
   2. 4-7
   3. 8-11
   4. 12-15
   5. 16-19
   6. 20-23
   7. 24-27
   8. 28+

9. When did you obtain your present job?
   1. Prior to graduation
   2. Currently unemployed
   3. After graduation

10. How many full time jobs have you had since leaving school?
    1. One
    2. Two
    3. Three
    4. Four or more
    5. None

11. What percent of the time since leaving high school have you been unemployed?
    1. 0-10%
    2. 10-25%
    3. 25-50%
    4. 50-75%
    5. 75-100%
12. How many part-time jobs have you had since graduation?
   1. One                  4. Four or more
   2. Two                  5. None
   3. Three

13. Do you belong to a union?
   1. Yes                  2. No

14. Which of the following has been most helpful in obtaining employment?
   1. No one
   2. Vocational Educational Counselor
   3. Teachers
   4. Parents
   5. State Employment Service
   6. Private Employment Service
   7. Guidance Counselor
   8. Friends
   9. Relatives
   10. Newspaper Ads
   11. Other

15. Which one of the following classifications applies to your current or normal employment?
   1. Professional and managerial
      (Such fields as art, science, engineering, law, education, medicine, business relations, managerial and technical work, administrative, etc.)
2. Clerical and sales
   (Stenographer, typist, file clerk, bookkeeper, cashier, bookkeeper machine operator, stock clerk, mail carrier, telephone operator, collector, hotel clerk, salesman, routemen, sales clerk, etc.)

3. Service
   (Domestic worker, maid, maintenance man, laundry worker, hostess, waiter, dishwasher, bartender, nurse's aide, checkroom attendant, barber, cosmetologist, etc.)

4. Agriculture
   (Associated with various phases of farm work.)

5. Skilled
   (Construction trades painter, carpenter, mason, plasterer, plumber, roofer, electrician; metal trades-machinest, welder, tool and die-maker, machine repair, millwrights, cabinet maker, etc.)

6. Semi-skilled
   (Truck driver, bus driver, assembly line worker, tree trimmer, machine operator, lather, material handling equipment, assembler, stockman, inspector, etc.)

7. Unskilled
   (Requires no special training - dishwasher, hoisting, messenger, handling and making materials, loading, unloading, digging, hauling, woodchopping, mixing, wrapping, etc.)

8. Homemaking

9. Unemployed

16. Did you take any special training for this job?

1. No training
2. Area Vocational school
3. Private training center
4. Rehabilitation training
5. On-the-job training
6. Other __________________
17. What is the average time you have been employed since leaving school? (In months)

1. 0-3 4. 12-15
2. 4-7 5. 16-19
3. 8-11 6. 20+

18. Have you ever collected unemployment compensation?

1. Yes 2. No

19. Do you know what unemployment compensation is?

1. Yes 2. No

20. How many hours do you work each week?

1. 0-5 hours 4. 21-30 hours
2. 6-10 hours 5. 31-40 hours
3. 11-20 hours 6. 40+ hours

21. Do you save money?

1. Yes 2. No

22. Do you have a savings account?

1. Yes 2. No

23. How much take home pay do you get each month?

1. $0-$99 4. $300 to $399
2. $100 to $199 5. $400 to $499
3. $200 to $299 6. $500+

24. Do you have a checking account?

1. Yes 2. No

25. Do you have life insurance?

1. Yes 2. No

26. Do you have hospitalization insurance?

1. Yes 2. No
APPENDIX II

ITEMS FROM QUESTIONNAIRE INCLUDED IN DETERMINATION OF SOCIOCIVIC COPING ABILITY INDICES

Instruction:

Questions are arranged so they may be asked directly by interviewer. Check or circle only one answer unless otherwise noted.

1. What is your marital status?
   1. Single
   2. Married
   3. Divorced but not remarried
   4. Separated
   5. Widow or Widower, not remarried
   6. Divorced and remarried
   7. Widow or widower remarried

2. Do you have any children?
   1. Yes
   2. No

3. Do you have a driver's license?
   1. Yes
   2. No

4. Did you get a driver's license while attending public school?
   1. Yes
   2. No

5. Did you take driver's education?
   1. Yes, public school
   2. Yes, privately
   3. No

6. Did you ever get any traffic tickets?
   1. Yes
   2. No
7. Are you registered to vote?
   1. Yes  
   2. No

8. If you answered yes to question 7 have you ever voted?
   1. Yes  
   2. No

9. Do you read a newspaper?
   1. Yes  
   2. No

10. If you answered yes to question 9, what sections do you read? (More than one answer may be circled.)
    1. Comics
    2. Sports
    3. TV section
    4. Want ads
    5. News
    6. Not applicable

11. Do you read books?
    1. Yes  
    2. No

12. Do you read magazines?
    1. Yes  
    2. No

13. Do you have a library card?
    1. Yes  
    2. No

14. Do you have a doctor?
    1. Yes  
    2. No

15. Do you have a dentist?
    1. Yes  
    2. No
16. What is your favorite free time activity?

1. TV 4. Movies
2. Sports participation 5. Hobbies
3. Social events (dances, club meetings, parties, etc.)
6. Other

17. Have you ever made a long distance telephone call?

1. Yes 2. No

18. Have you ever asked for the operators help in making a long distance call?

1. Yes 2. No

19. Do you buy your own clothing?

1. Yes 2. No

20. Do you buy your own groceries?

1. Yes 2. No

21. Do you cook your own food?

1. Yes 2. No

22. Do you handle the money in paying the bills?

1. Yes 2. No

23. Have you ever gone on trips?

1. Yes 2. No

24. Where have you gone on trips?

1. Out of state 3. In county only
2. In state only
25. How many close friends do you have?
   1. 1-4
   2. 5-9
   3. 10-14
   4. 15+

26. Do you make use of community recreation programs?
   1. Yes
   2. No

27. If you answered yes to question 26, which of the following community recreation programs have you used?
   1. Community center
   2. Swimming program
   3. Sport programs
   4. YMCA/YWCA clubs
   5. 4H clubs
   6. Scouting

28. Do you attend church?
   1. Yes
   2. No

29. Do you go to movies?
   1. Yes
   2. No

30. With whom do you go to movies?
   1. Family members
   2. Friends
   3. Both
   4. Alone

31. Do you feel that you are doing what is expected of an adult in your community?
   1. Yes
   2. No
APPENDIX III

ITEMS FROM QUESTIONNAIRE INCLUDED IN DETERMINATION
OF EDUCATIONAL PROGRAM AND TRAINING OF
SECONDARY MENTALLY RETARDED ADULTS

Instruction:

Questions are arranged so they may be asked directly by the interviewer. Check or circle only one answer unless otherwise noted.

1. How many years did you spend in special education?
Check grades that subject was in special education.

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

2. How many years did you spend in regular education?
Check grades that subject was in regular education.

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

3. Did you enjoy school?

1. Yes
2. No

4. Which type of program, special or regular did you enjoy most? (Only if applicable)

1. Regular Program
2. Special Program

5. How did you find the academic requirements made upon you in the special education class?

1. Just right
2. Too easy
3. Too difficult

6. Did the special education program help you?

1. Yes
2. No
7. Did you receive any vocational training while in school?
   1. Yes  2. No

How do you feel the schools helped you in:

<table>
<thead>
<tr>
<th></th>
<th>Great Deal</th>
<th>Somewhat</th>
<th>Little</th>
<th>None</th>
</tr>
</thead>
<tbody>
<tr>
<td>8. Applying for a job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Having good work habits</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>10. Being trained for a specific job</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>11. Understanding your abilities and interests</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>12. Getting along with others</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>13. Using your spare time.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>14. Taking part in community affairs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>15. Adult and family affairs.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>16. How old were you when you left school?</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
   1. 14              5. 18
   2. 15              6. 19
   3. 16              7. 20+
   4. 17

17. How many years have you been out of school?
   1. One  3. Three+
   2. Two

18. Did you receive a high school diploma or certificate of graduation?
   1. Yes  2. No
APPENDIX IV

SCHOOL INFORMATION SHEET
(To be filled in by interviewer in cooperation with school personnel.) Check appropriate column(s).

1. Curriculum Offerings to Subject
   a. Academic Subjects
      ___(1) English
      ___(2) Math
      ___(3) Science
      ___(4) Social Studies
      ___(5) Physical Education
      ___(6) Other__________
   b. Vocational Subjects
      ___(1) Occupational Information
      ___(2) English
      ___(3) Typing
      ___(4) Shop
      ___(5) Home Economics
      ___(6) Math
      ___(7) Bookkeeping
      ___(8) Other________________

2. Subject's Specific Vocational Training
   ___a. Automotive Maintenance
   ___b. Building Maintenance
   ___c. Child Care
   ___d. Food Services
   ___e. Housekeepers
   ___f. Wood Industries
   ___g. Crafts
   ___h. Office and Related Occupations
   ___i. Metal Industries
   ___j. Masonry Occupations
   ___k. Public Utilities

3. Number of years student spent in special education
   (Circle) 1 2 3 4 5 6 other____

4. Number of years subject has been out of school
   (Circle) 1 2 3 4

5. Extra-curricular Activities
   ___a. Choir
   ___b. Instrumental Music
   ___c. Basketball
   ___d. Track
   ___e. Volleyball
   ___f. Student Council
   ___g. Bible Study
   ___h. Other________________
6. Availability of Vocational Rehabilitation
   - Yes
   - No

7. Vocational Rehabilitation Referrals
   - a. Welfare
   - b. Employment Security
   - c. Social Security
   - d. Private Industries
   - e. Doctors
   - f. Schools
   - g. Others

8. Vocational Rehabilitation Services to Clients
   - a. Job Observation
   - b. Job Tryout
   - c. Placement
   - d. Follow-up
   - e. Medical Services
   - f. Dental Services
   - g. Prosthetic Devices
   - h. Psychological
   - i. Psychiatric
   - j. Home Visits
   - k. Counseling
   - l. Training
   - m. Speech Therapy
   - n. Other
## APPENDIX V

KUDER-RICHARDSON 20 RELIABILITY AND ITEM-ANALYSIS FOR THE TOTAL INSTRUMENT

### APPENDIX I

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Reliability Estimate: KR20 = .842

*Items used in Chapter IV.

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Reliability Estimate: KR$_{20}$ = .748

*Items used in Chapter IV
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Reliability Estimate: $\text{KR}_{20} = 0.764$

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Reliability Estimate: $KR_{20} = .268$

TOTAL INSTRUMENT INFORMATION

Number of Students = 51

Number of Items = 83

Reliability Estimate = $KR_{20} = .884$
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BIBLIOGRAPHY

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B. ARTICLES IN JOURNALS OR MAGAZINES


Dunn, Lloyd M. "Special Education for the Mildly Retarded - Is Much of it Justifiable?" Exceptional Children. 35: 5-23, 1968.


Iano, Richard P. "Shall We Disband Special Classes?"  
The Journal of Special Education. 6: 167-177, 1972.


C. UNPUBLISHED MATERIALS