AN EXPLORATORY STUDY OF THE EFFECT OF MODEL - REINFORCEMENT COUNSELING ON THE VOCATIONAL BEHAVIOR OF A GROUP OF MALE RETARDED ADOLESCENTS

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ABSTRACT

AN EXPLORATORY STUDY OF THE EFFECT OF MODEL-REINFORCEMENT COUNSELING ON THE VOCATIONAL BEHAVIOR OF A GROUP OF MALE RETARDED ADOLESCENTS

By

George William Krieger

The general purpose of the study was to investigate the vocational planning behavior of a group of mentally retarded adolescents. The specific purpose was to compare the effectiveness of two vocational planning procedures with retarded eleventh and twelfth grade boys. One presentation was a model and reinforcement counseling treatment, the other a structured interview control procedure. The criterion variables were performance of vocationally relevant behaviors, knowledge of vocational exploration strategies and a vocational interest measure.

The setting for the study was the Kent Occupational High School (KOHS) in Wyoming, Michigan. The school is a special high school for the educable retarded and uses a work-study program of training.

The subjects in the study were eleventh and twelfth grade boys from the school. Juniors and seniors were

randomly assigned to experimental and control groups. The total sample consisted of fifty-six subjects, fourteen in each of the four groups. The IQ range of the subjects was 58-82.

The experimental session consisted of the presentation of a taped counseling model plus the verbal reinforcement by the counselor of vocationally relevant responses of the subject. Typical reinforcers used were "Good," "Good idea," "Fine," "Sounds like you've really been working on it," and similar expressions of approval. Examples of responses reinforced were questions, "How can I find out about farm jobs?"; suggestions, "I guess I could read some books at the library"; and discussions of previous behavior, "I talked to my teacher last week about jobs."

The control group received a general structured interview. Topics discussed varied and included job plans, athletic interests, and school interests. No selective reinforcement of responses took place. No model tape was used.

The treatment and control sessions both lasted for thirty minutes. Both experimental and control groups received two sessions of their procedures, one week apart. Both groups were interviewed on the third week on the criterion variables.

Eleven graduate students served as counselors for the study. All counselors received pre-training in the

use of the appropriate treatment procedures. Five graduate students served as criterion interviewers.

Six basic hypotheses were investigated:

1. Subjects who receive the experimental treatment will score higher on a measure of Vocational Planning Strategies (VPS) than will control subjects.
2. Subjects who receive the experimental treatment will score higher on a measure of Vocational Planning Behaviors (VPB) than will control subjects.
3. Subjects who receive the experimental treatment will score higher on a measure of Vocational Interest (VI) than will control subjects.
4. There is a difference between seniors and juniors on VPS.
5. There is a difference between seniors and juniors on VPB.
6. There is a difference between seniors and juniors on VI.

The above hypotheses were tested using a 2x2 analysis of variance technique. The significant level was set at .05. Correlations and summary tables were used in secondary analyses.

Hypotheses 1 and 2 were supported by the data. This result indicated that there was difference in the predicted direction due to the treatment on the variables of

VPS and VPB. Hypotheses three thru six were not supported by the data. Differences on these hypotheses were likely to be chance differences.

The main conclusion of the study was that a presentation based on a model plus reinforcement counseling technique did increase VPS and VPB when compared with a control procedure. Class status did not make a difference on any of the criterion variables. Previous relevant studies were discussed in relation to this one. Implications for future practice were discussed. Suggestions for future research were stated.

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Dedicated to

my wife Joyce, whose emotional support and encouragement enabled me to perservere

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CHAPTER I

THE PROBLEM

We know little about the vocational choice process of the mentally retarded. It is known that the retarded tend to choose low level jobs. Many of these jobs are becoming scarce as the technological level of our society increases. This fact makes it vital that we know more about the way in which the mentally retarded make vocational choices. We need to know how to help the retarded make realistic vocational plans in todays world. Recently some attention has been drawn to this area in the literature. Shulman (1968) has studied a group of retarded adolescents in a workshop setting. A major conclusion in his study was that the vocational development process in the retarded is a complex one. DiMichael (1966) has discussed the areas of work preparation and work study programs for the retarded. He emphasizes the current need to expand our educational services to meet the needed of the retarded.

The current study will focus on the use of techniques based on principles of learning to influence the

vocational planning behavior of the mentally retarded. Borow (1966) indicates that the increased use of behavioral counseling techniques seems indicated as a means of promoting improved educational and vocational planning strategies among school youth. He states that an experimental approach to the use of behavioral counseling is to be recommended. He speaks of occupational behavior a term which includes personal planning, knowledge and uses of sources of occupational information, and the sequence of decisions in the career pattern chain. The literature does contain some studies that have attempted to directly deal with the principles of behavioral counseling and vocational planning. The studies have applied principles of social learning theory to research with normal high school students. Krumboltz, Thoreson and their colleagues have conducted a number of these studies. Their subjects were students in suburban high schools in California. They have shown that a modeling treatment plus reinforcement of appropriate responses can lead to an increase in the information seeking behaviors of their subjects. Information seeking behaviors (ISB) are assumed to lead to appropriate vocational planning. The current study will look at ISB in a sample of retarded adolescents. Kliebhan (1967) has used a modeling technique in a workshop for the retarded. She found that the use of a model can increase the vocationally relevant behaviors of the clients in the workshop.

Also relevant are a number of studies by Sinick and Hoppock (1953a, 1953b, 1956, 1961, 1964), Sinick, Gormon and Hoppock (1966), and Hoppock (1967). The studies are concerned with the teaching of courses or units on occupations. The authors indicate that schools are paying increased attention to the presentation of occupational information. Course in occupational information can lead to a number of different vocationally relevant behaviors. These behaviors include increase in job satisfaction and earning power, range of occupational interests, and job knowledge. There have been a small number of studies that are directly concerned with the use of occupational information with the mentally retarded. These studies will be reviewed in a later section.

The problem that will be investigated here, is how to help the mentally retarded to improve the effectiveness of their vocational planning behavior.

Purpose

The general purpose of the study is to investigate the vocational planning behavior of the educable mentally retarded.

The specific purpose is to compare the effectiveness of two vocational planning presentations with retarded eleventh and twelfth grade boys. One presentation will be a model plus reinforcement counseling treatment, the other a structured interview control treatment. The criterion variables will be the performance of vocationally relevant

behaviors, knowledge of vocational exploration strategies and interest as measured by a vocational interest scale.

In addition the subjects will be divided into two groups, seniors and juniors. These two groups will then be compared on the criterion variables.

Theory

The section on theory will be concerned with that material which is most relevant to the current study. Areas covered are vocational exploration and planning, and operant conditioning. Although the concept of modeling is an important one for the study, this concept is described in the review of the literature rather than in the present section.

Vocational Exploration and Planning

The areas of vocational exploration and planning are important for this study. Exploration can be seen as the process of acquiring relevant information, just finding out what an area is all about. Vocational planning is more of an organized process, the putting together of the information previously acquired.

Super and Overstreet (1960) talks of the process of vocational maturity which can be seen as the readiness to benefit from occupational exploration. They see four factors as important for vocational maturity. They are: (1) living in an intellectually and culturally stimulating environment,

(2) having the mental abilities to respond to that enviroment, (3) responding to these stimuli at higher rather than lower socioeconomic levels, and (4) achieving in one's activities. In this instance the authors are referring to intellectually normal ninth graders. They found that more than half of the ninth graders studied had apparently done little about getting information on which to base their plans. They go on to say that the early adolescent stage is not one of making and implementing a vocational choice but rather of developing planfulness, of preparing to make a series of occupational and educational decisions. Super and Overstreet's work does not deal with the vocational growth of the intellectually limited. The present study attempts to investigate how best to help develop occupational readiness amoung retarded high school boys.

Gribbons and Lohnes (1964) have investigated the concept of vocational planning through a ten year longitudinal study begun in 1958. Their original sample consisted of 110 boys and girls in the eighth and tenth grades. Again their sample was of an intellectually normal population. The authors developed a Vocational Planning Interview Scale. They found that the scale could separate the subjects into three curricular groupings. These groupings were helpful in predicting as early as the eighth grade, the curriculum in which a youngster would be in high school. The importance of

this study lies in its specific investigation of vocational planfulness, which is extended into the field of retardation in the present study.

It has been recognized recently that vocational planning is dependent on the effective use of occupational information. O'Hara (1968) has looked at some of the theoretical aspects of the issue. He indicates that the information must be related to the vocational readiness of the student. The expectations of the student are also important. Vocational counseling involves imparting a sense of vocational development not just job facts. O'Hara makes it clear that

> . . . guidance counselors must intervene in the habitual perceptions of the vocational world in order to broaden that perception, to open up the number of options available to make the option clear, distinct and patterned in accordance with the unique interests, abilities and values of the student (p.640).

The present study will look at some aspects of that process as it applies to the retarded student.

Other authors have drawn attention to the importance of occupational information in vocational guidance although not specifically referring to the retarded. The concepts discussed are relevant though. Samler (1961) stresses the need to develop new approaches to the use of occupational information. He thinks that the psychological realities of jobs must be taken into consideration as well as job facts. Rusalem (1954) thinks that occupational information must be incorporated into

the counseling of the whole person. He sees occupational information as playing two roles in vocational guidance, exploratory (pre-vocational) and verificatory (vocational). It is important for the student to play an active rather than passive role in the process. Pritchard (1962) sees occupational exploration as part of a total vocational development approach. He stresses the development and use of valid occupational tools, and the integration of self exploration and occupational exploration, as the student plans for the future.

Recently, Jordaan (1963) has related the general area of exploratory behavior to the more specific topic of occupational exploration. He states that the desire to emulate a role model can lead to exploratory behavior. He also lists a number of outcomes of exploratory behavior. The following outcomes which are relevant to this study as enumerated: increased self-knowledge, i.e., more realistic appraisal of his interests, abilities, values and personality traits and more realistic appraisal of his strengths and shortcomings; increased ability to related the new knowledge to future objectives; increased and more specific knowledge of occupational possibilities; change of occupational or educational objective; increased awareness of the choices and decisions which will shortly be confronting him.

The general purpose of the current study is to explore some of the variables discussed above as they apply to a mentally retarded high school population.

Learning and Operant Conditioning

A short section on principles of learning and operant conditioning follows. These principles are very much related to the treatment. Principles of learning are playing a large role in current research in counseling and psychotherapy. Early studies by Verplanck (1955) and Greenspoon (1955) have shown that selective verbal reinforcement of certain subject responses can lead to an increase in the frequency of those responses. Verbal conditioning can be seen as "the systematic application of social reinforcements to influence the probability of another person emitting a specifiable verbal behavior" (Krasner, 1965, p. 213). Recent studies (see Krumboltz and Thoreson, 1964) have tried to extend the application of verbal reinforcement to information seeking behaviors as well as verbal behaviors.

Baumeister (1967) outlines six principles of operant conditioning:

1. The desired response must be potentially available.
2. Desired behaviors should be reinforced and undesirable ones ignored.

3. Reinforcement should be immediate.
4. In establishing the behavior, the reinforcement should be administered on each occasion of the response. Then as learning progresses, reinforcement should be delivered on an intermittent basis.
5. The desired behavior should be "shaped" by rewarding successive improvements in the components that constitute the behavior.
6. The subjects environment during the initial stages of learning should be held as constant as possible.

The current study will attempt to show that principles of verbal reinforcement can be applied to help increase vocational planning behavior in the mentally retarded.

Research Hypotheses

The intent of this study is to compare a model plus reinforcement counseling treatment with a control treatment. The general hypothesis is that the experimental treatment will result in higher scores than the control treatment on the three criterion measures. The specific research hypotheses follow.

1. Students who receive the treatment will score higher on a measure of Vocational Planning Strategies (VPS) than will control subjects.

2. Students who receive the treatment will score higher on a measure of Vocational Planning Behaviors (VPB) than will control subjects.
3. Subjects who receive the treatment will score higher on a measure of Vocational Interest (VI) than will the control subjects.
4. There is a difference between seniors and juniors on VPS.
5. There is a difference between seniors and juniors on VPB.
6. There is a difference between seniors and juniors on VI.

Definition of Terms

Vocational Planning Strategies (VPS): This term refers to knowledge of how to go about getting occupational information. It is primarily cognitive in nature. Examples: "I could write to the local employment servie" or "I could talk to my brother."

Vocational Planning Behaviors (VPB): This term refers to the direct action of the subject in searching for occupational information. It is an active process. Example: writing to the local employment office or talking to one's brother. The difference between a VPS and a VPB is primarily one of knowing what to do versus having already done it.

Vocational Interest (VI): This term is defined as a score on a level of interest test consisting of a list of 35 occupations.

Mental Retardation: This term refers to subaverage general intellectual functioning which originates during the developmental period and is associated with impairment in one or more of the following: (1) maturation, (2) learning, (3) social adjustment (Heber, 1961).

Educable Mentally Retarded (EMR): This term can be defined in more than one way. Dunn (1963) defines this group as having an IQ range of 50-75, possessing learning difficulties in regular school, and having the ability to be literate. Kirk (1962) defines the EMR as being minimally educable in academic, social and occupational areas. Cawley and Pappanikos (1967) define the EMR group as having impairment resulting in a generally measurable level which is one-half to three-fourths that of normality in one or more of the following: (1) maturation, (2) learning, (3) social adjustment.

The above three viewpoints help to define the population used in this study. All subjects have been classified as EMR by a diagnostician of the State of Michigan. Their IQ range is 58-82. They have been judged unable to handle regular classroom work.

Limitations

1. The setting in which the study was carried out may be typical.

2. All subjects in the study were male. Subjects were white and most came from rural backgrounds. These factors limit the genealizability of the results.
3. The treatment used was a relatively short term one. Similar treatments over a longer period of time may effect different results than the present treatment.

Organization

In Chapter II pertinent literature related to vocational planning of the mentally retarded will be reviewed. In Chapter III methodology will be discussed. This will include sample, instruments used, definitions of the treatments, experimenters used, statistical analysis, and statistical hypotheses. In Chapter IV results will be analyzed. In Chapter V conclusions will be discussed. Also included in Chapter V will be implications for future research and a summary of the study.

CHAPTER II

REVIEW OF THE LITERATURE

An attempt was made to select from the available literature only those studies that seemed most relevant to present one. The review is thus divided into four sections; social learning theory and information seeking behavior, vocational behavior of the mentally retarded, work study programs, and vocational choice of the mentally retarded.

Social Learning Theory and Information Seeking Behavior

Krumboltz, Thoreson and their colleagues have conducted a number of studies in which they have attempted to increase the occupational exploration behaviors of their subjects. In one of their studies, Krumboltz and Thoreson (1964), randomly assigned 192 high school students to their treatment groups. Three principle treatment groups were selected. They were reinforcement counseling, model-reinforcement counseling, and control groups. In the reinforcement counseling treatment, the counselor verbally reinforced any indication that the client had sought, was presently seeking or intended to seek information relevant

to his own educational or occupational plans. In the model-reinforcement treatment, a 15-minute tape of a counseling interview was presented. The model counselor reinforced question asking and information seeking responses. The model client was active and responsive. After the tape was over, the counselor continued the interview in the same manner as in the reinforcement counseling treatment. In the control film discussion group a film was shown and the counselor answered questions following the film. An inactive control group was also included. The criterion behaviors for the study were the variety and frequency of student information seeking responses which occurred outside the counseling interview during a three-week period after the first counseling session. An example of an information seeking behavior (ISB) is the reading of a school catalogue or the discussing of one's vocational plans with one's parents. Results showed that the model reinforcement and reinforcement counseling procedures produced a higher variety and frequency of ISB than the control procedures. The model reinforcement treatment proved most effective, followed by the reinforcement treatment, for all subjects. However, model reinforcement counseling was more effective than reinforcement counseling alone for males but not for females. Further, group and individual presentation seemed equally effective on the average. However, male subjects receiving model reinforcement counseling treatment did better under

group situations. Reinforcement counseling for males was more effective in individual than in group settings. Thus although the main results were significant a number of additional questions were posed.

The above study indicates that experimental procedures can be devised to influence the vocationally relevant behaviors of normal high school students. The authors were not concerned with the applicability of the procedures to a retarded high school population. In the present study an attempt will be made to test out similar procedures with a population of adolescent mentally retarded.

In a follow-up to their first study Thoreson and Krumboltz (1967) report on a further analysis of their data. They investigated the relationship of a specific counseling outcome, client external information seeking behaviors, with interview response categories. There were two main findings. First, counselor reinforcement of a specific response class, in this case information seeking responses, was positively associated with client subsequent information seeking outside the interview. Secondly, the frequency of information seeking responses of students during the counseling interviews was positively related to the frequency and variety of their information seeking behavior outside the interview.

Krumboltz, Varenhorst, and Thoreson incorporated some changes into the earlier designs (1967). Subjects in this study were 168 female eleventh grade students. A video

tape model was presented. In this treatment the counselor reinforced information seeking responses. Counselor attentiveness was studied as a second variable. The counselor on the tape either showed interest or lack of attention. A third variable in the investigation was prestige. The counselor on tape was either introduced as possessing high or low prestige. A main conclusion of the study was that the use of relevant female social models did increase the ISB of the students. Differences in attentiveness and prestige did not differentially affect the criteria. On the basis of this study and previous ones that authors concluded that an appropriate social model seems effective in increasing ISB for both males and females.

Thoreson, Krumboltz, and Varenhorst (1967) looked at the variables of counselor sex and client sex in influencing ISB. The study was replicated in two surburban high schools in California. Ninety-six subjects were used. The groups used were model-reinforcement counseling, active control counseling, and an inactive control group. The criterion behaviors consisted of the frequency and variety of student ISB which occurred outside of the counseling interview during a three week period after the first interview. Results showed that male subjects receiving the model-reinforcement counseling showed more ISB than comparable controls. For male subjects, model reinforcement counseling using male models

and a male counselor lead to more ISB than any combination using female counselors or models. Female subjects showed more ISB when counseled by a male counselor using a model tape using either all males or all females.

Stewart (1968a, 1968b) has summarized the studies done by the Krumboltz and Thoreson group. He extended their work by looking at group counseling and career development. He found that ISB can be promoted as well within a small group setting as with individual counseling. He also found that modeling procedures in concert with small group interaction have proven more effective than reinforcement counseling alone.

Other studies by Krumboltz and Schroder (1965), Sudyk (1968) and Thoreson and Krumboltz (1968) have shown the effectiveness of modeling and reinforcement in promoting desired behaviors.

The series of studies reported above has shown the effectiveness of various kinds of treatment models in influencing vocationally relevant behaviors of the students. Some questions remain. Were the ISB really meaningful in terms of subsequent vocational planning? For example, do students who spend more time reading employment brochures make better vocational plans than other students? It does seem that the techniques used can be meaningfully integrated into the vocational counseling process. It is the thesis of this paper that the techniques can also be meaningfully applied to a mentally retarded high school population.

Research on the Vocationally Relevant Behavior of the Educable Mentally Retarded

There are a small number of studies that look directly at the way in which the mentally retarded make their vocational plans. Some are concerned with vocational interests. Others are concerned with the use of occupational information. Many of these studies were done as doctoral dissertations.

Fudell (1963) constructed twelve occupational units to help mentally retarded adolescents to achieve increased occupational readiness. The units were presented to four classes in social studies. Four comparable classes received no occupational instruction. A number of pre and post measures were used including the Vineland Social Maturity Scale and the Fudell Test of Occupational Readiness. The author concluded that the twelve occupational units could advance educable mentally retarded students to a higher level of occupational readiness.

Erdman (1957) studied the vocational choices of mentally retarded boys. His subjects were 106 educable mentally retarded boys in special schools in Wisconsin. Vocational choice was determined through an interview procedure. Erdman found that many of the subjects were able to make realistic choices. The majority of the choices were at the unskilled and semi-skilled level. The author further states that there are a number of complex factors influencing the vocational choice of

of his subjects. The study is non-experimental in nature. The author does state that an analysis of time spent teaching occupational information, the number of vocational services, or the existence of an organized course of study appears to have a minimal influence on the level of choice.

Kuhn (1966) investigated the level of EMR adolescents expressed understanding of occupations. Three groups of subjects were used. The experimental group consisted of fifty junior high school students in a class for EMR. A chronological age control group and a mental age control group were also used. All subjects were interviewed regarding their understanding of fourteen related occupations representing seven occupational categories. Each subject was also shown a picture of a person in each of the selected occupations. The main instrument used was a twelve item questionnaire designed to tap the subject's level of understanding of occupations. Vocational preferences were also obtained. The main conclusion of the study was that the level of understanding of EMR adolescents and intellectually normal children of comparable CA and MA did differ significantly. The general level of the retarded group indicated a minimal level of understanding of the general aspects of an occupation.

One implication of the above study is that further work is needed to help EMR youngsters to become more aware of the relevant aspects of occupations. It is

also important to look at high school as well as junior high school students. There are also a number of variables that must be looked at when comparing a retarded population with a non-retarded population. Such factors as social adjustment, home environment and chance for experience are also important.

Plotkin (1966) investigated the effects of occupational information on the vocational interest patterns of slow learning senior high school boys. The experimental treatment consisted of fourteen class sessions of a specially devised occupational curriculum. The author found that the experimental group showed significantly higher interest patterns when compared to a control group. The instrument used was the Kuder General Interest Survey. Plotkin concludes that specialized classes in occupational information should be administered to slow learners in a school program.

Parnicky, Kahn and Burdette (1965) attempted to develop a valid predictor of job success of retarded individuals. Their instrument is called the Vocational Interest and Sophistication Assessment Test (VISA) The authors found that the vocational preferences of the retarded can be discriminated through the use of the test which consists of a series of pictures of various work situations. The pictures are concerned with institutional work settings i.e., farm and grounds work, food service,

laundry and light maintenance. The authors plan to test their instrument in school and workshop settings.

Burg and Barrett (1965) also worked on a novel approach to the study of interests of the mentally retarded. They developed a bi-sensory (pictures plus words) modification of the Geist Picture Interest Inventory. The instrument was administered to seventy-nine mentally retarded subjects (thirty-nine males and forty females). The IQ range of the subjects was 34 to 79. The results followed the culturally expected directions for male-female vocational interests. The males showed high interests in mechanical and outdoor activities. The girls scored highest in the following areas: persuasive, musical, literary, clerical, and social service. The importance of this study is that it is one of the few that attempt to specifically deal with the vocational interests of a mentally retarded population.

The use of pictures to study the interests of the retarded is not new. McIntyre (1941) mentions pictures as a good way to get at vocational likes and dislikes of the retarded. The number of studies in this area is small however. Magary (1960) used the Geist Picture Interest Inventory with the retarded. His sample was ninety. Subjects were males in special classes. The author found no difference in twelve inventory scale means for three occupational classes. He found no

difference among inventory means of the entire retarded group and an undifferentiated normal group of male adolescents.

The studies in this section illustrate a number of points. Occupational information can increase the vocational knowledge of the retarded. Vocational choices of the retarded tend to cluster in the lower level jobs. Retarded students may advance at a difference pace in their vocational development when compared with the non-retarded. At least one vocationally relevant behavior, increase in vocational interest patterns can be experimentally manipulated. Most of the treatments described in this section are broad in nature. They may consist of a class in occupational information over a school term. It is difficult to be sure of one's findings when the treatment used is so broad. Many extraneous factors can mask as treatment effects. It is one of the goals of the present investigation to design specific treatment procedures to influence the vocationally relevant behaviors of the subjects.

Work Study and Workshop Programs

Work study programs attempt to introduce the retarded youth to the world of work. Academic skills are integrated with vocational training. Ofter workshops are included as part of the curriculum. On the job training programs serve as a final test to determine whether or not

the student can function in an actual work setting. Kolsoe and Frey (1965) indicate that occupational information should be included as part of the curriculum. They also state that lack of familiarity with the jobs that are available within their range make vocational planning difficult for the retarded. The authors also discuss a number of areas that should be included in order to make the program more effective. Deno (1966) emphasizes the importance of formal work preparation. He states that jobs for the retarded are available, but that curricula in work study programs must be redesigned to meet the vocational needs of the students. Karnes (1966) also points out the importance of work study programs in the vocational planning of the retarded. She indicates that the job choices of the retarded tend to be in the unskilled and semi-skilled categories.

One program that has had a great deal of success is the Kent Occupational High School (KOHS) located near Grand Rapids, Michigan. This is a county wide training program for retarded youth. (Warren, 1965) There is a sheltered workshop in the building. The first two years of the program consist of a school curriculum of academic and vocational skills. During the third year the students are placed in on the job training sites. A sample of some of the jobs held are: metal parts racker, punch press operator, warehouse worked, cook, service station attendant, and custodian.

Bloom (1967) discusses a work study program in Texas. He lists a wide variety of on the job assignments such as auto repair shops, hospital linen room, supermarkets, and venetian blind shops. He found that job attitudes and personality variables could be positively affected by the program.

Shulman (1968) studied the process of vocational development in a sample of retarded adolescents. The study was conducted in a sheltered workshop. The sample consisted of fifty-five students divided into experimental and control groups. Ages of subjects was 14-15, and IQ varied from 50 to 75. The experimental group received a program of workshop centered rehabilitations services, while the control group did not. A major finding was that there was no difference between the two groups on a measure of work behavior in the shop. However the author was able to divide all subjects onto high or low employability groups. This was done on the basis of production scores and ratings. It turned out that the factor of employability was a valid predictor of future educational or vocational adjustment.

One conclusion of the above study related to the complexity of the process of vocational development of the subjects. The vocational development process is not uniform for all subjects. Different subgroups show different rates of vocational growth. Such characteristics as race,

economic status, level of aspiration, and self-concept must be taken into consideration in evaluating the youngsters. This is one of the few studies that does investigate the vocational development of the retarded.

In the current study a work study program for the educable mentally retarded will be studied. The main focus will be on vocationally relevant behavior of the students including vocational interests, strategies of vocational planning and behaviors of vocational planning. The central thesis is that appropriate methods of presentation of occupational information can aid the retarded student to plan more appropriately for his vocational future.

Vocational Choice of the Mentally Retarded

The ultimate goal of improving the vocational planning behavior of the mentally retarded is to help them to make appropriate vocational choices. The range of jobs usually selected by mentally retarded youth is small. Perhaps the kinds of choices made by the retarded is as much determined by the stereotypes of counselors and placement men as it is by the actual needs, values and choices of the retarded themselves.

Cohen and Rusalem (1964) investigated the vocational values of the retarded. They hypothesized that the ordering of occupational values by the retarded would not differ

significantly from that of the non-retarded, dispite intellectual and experiential differences between the two groups. The authors used three samples: eighty-five retardates from a training and rehabilitation center, ninety-two pupils from special classes in a school system, and ninety-nine regular high school pupils. In general the three groups differed in age, IQ, and reading achievment. Each group was asked to rank a list of nine occupational values. The authors found that the role expectancies of non-retarded boys seemed to differ from that of retarded boys. The retarded boys seemed to choose values that would give immediate rather than long range gratification. The role expectancies of retarded girls were similar to that of non-retarded girls. The study indicates that vocational values of the retarded may not always be similar to the non-retarded. This fact makes the issue of the job choice of the retarded even more vital.

There is still much stereotyping in the placement of the retarded. Many of the studies reported here are quite old, but they do shed light on the traditional role of the mentally retarded worked. Kerp and Nathan (1932) is a study of workers in San Francisco found that only one of eight positions held by retarded men and one of four held by retarded women rose above the level of unskilled labor. Thomas (1943) reports on 143 retarded workers, graduates of special classes in Illinois. He

found that 76 per cent of the jobs held by males were unskilled factory jobs. Channing (1932) studied the work histories of 949 graduates of special class programs. He found most of the workers at semi-skilled and unskilled levels. He states that in view of the lack of occupational training and vocational guidance given most of the young people it was surprising that they were able to find and hold jobs. Other authors such as Martins (1937) and Bobroff (1956) confirm the clustering the retarded in unskilled jobs.

Wolfensberger (1967) states that the retarded can on occasion gain entry into skilled and unusual occupations and can earn very good salaries. In terms of one kind of placement he states

> . . . if a counselor or an agency believe that service occupations are optimal placement for retardates than there will be an increased likelihood that such placements are sought and obtained and stronger encouragement may be given to retardates to take and hold such jobs (p.239).

The central conclusion of this section is that we must reevaluate our placement procedures with the retarded. Perhaps we are placing the retarded in narrowly conceived of slots. Better vocational planning can help the retarded to make optimum choices.

Summary

The following area were reviewed: use of modeling and reinforcement to increase ISB, studies of vocational

behavior of the retarded, work study and workshop programs, job choice of the retarded. There were a number of general conclusions reached. Modeling-reinforcement techniques can increase vocationally relevant behaviors of the retarded. Occupational information can make a difference in increasing the vocational planning skills of retarded. Vocational development is a complex process in the retarded. Interests of the retarded can be measured. There are an increasing number of programs that are attempting to bridge the gap between school and work for the retarded. Study of job choice and placement show the retarded clustered in service, unskilled, and semiskilled jobs, perhaps unnecessarily, although they may show a wide range of vocational interests.

The world of work is changing. Unskilled jobs are less numberous than before. Both the retarded and the non-retarded need more training and counseling in order to make meaningful vocational decisions. It is the purpose of the present study to take a clear look at a group of students in a vocational training high school program for the retarded. Attention will be paid to the kind of methods that can enhance the vocational planning behaviors among the subjects. In the next chapter the methodology of the study will be presented.

CHAPTER III

DESIGN OF THE STUDY

Sample

The sample consisted of fifty-six male students from the Kent Occupational High School (KOHS) in Wyoming, Michigan. Subjects were white, and primarily rural. Their ages and IQ's are presented in Tables 3.1, 3.2, 3.3, 3.4. All subjects were classified as EMR by a diagnostician of the State of Michigan.

The subjects were randomly assigned to four groups: experimental-senior; experimental junior; control senior; control junior (Appendix A). The use of the four groups in the experimental design is presented in Table 3.5.

TABLE 3.1.--Mean ages for experimental and control groups (in years and months).

Group	Mean	Range
Experimental (N=28)	16-9	--
Control (N=28)	17-1	--

TABLE 3.2.--Mean ages for seniors and juniors (in years and months).

Group	Mean	Range
Seniors (N=28)	17-5	17-2 to 18-2
Juniors (N=28)	16-5	15-8 to 17-2

TABLE 3.3.--Means and standard deviations for experimental and control groups on IQ scores.*

Group	Mean	S. D.
Experimental (N=26)	74.07	5.56
Control (N=26)	74.50	5.38

*Based on fifty-two available scores.

TABLE 3.4.--Means and standard deviations for seniors and juniors on IQ scores.*

Group	Mean	S. D.
Seniors (N=27)	73.30	5.38
Juniors (N=25)	75.36	4.81

*Based on fifty-two available scores.

TABLE 3.5.--Experimental design.

Group	Week I	Week II	Week III
Experimental			
Seniors N=14	Treatment 1	Treatment 2	Criterion Interview
Juniors N=14	Treatment 1	Treatment 2	Criterion Interview
Control			
Seniors N=14	Control 1	Control 2	Criterion Interview
Juniors N=14	Control 1	Control 2	Criterion Interview

Treatment

Model Reinforcement Session 1

A model tape was constructed (see Transcript Appendix B). The student on the tape is a high school student in a regular program. He is role playing a client in a vocational counseling session. The counselor on the tape is the experimenter role-playing a vocational counselor in a high school setting. The tape lasted two minutes. It was intended to demonstrate for the subjects a good, i.e., active client seeking vocational counseling.

Each counselor was given a packet of instructions to use in the experimental session (Appendix C). Items included were an introductory statement, sample of kinds of statements to reinforce, sample of typical reinforcers to use, list of ways to find out about a job, and in general the procedures to follow during the two experimental interviews.

Each session began with the playing of the model tape. The counselor then used the tape as the basis for engaging the subject in a discussion of vocational plans, interests and needs. The counselor selectively reinforced statements of the subjects which referred to vocational planning. Types of statements to be reinforced and typical reinforcers were discussed with the counselors beforehand. Each counselor, however, used

the verbal reinforcers which he felt most comfortable with and which seemed most appropriate during the interview. Typical reinforcers used were: "Good," "Good Idea," "Fine," "Sounds like you've really been working on it," and similar expressions of approval. Examples of responses reinforced are questions, "How can I find out about farm jobs"; suggestions, "I guess I could read some books at the library"; and discussions of previous behaviors, "I talked to my teacher last week about jobs." Counselor asked questions of the subjects to help stimulate the discussion.

Near the end of the thirty-minute session the counselor replayed the model tape. The counselor and client discussed ways to find out about jobs as a review. The counselor expressed his interest in meeting with the client the following week. He said that they would be discussing the students activities in the second meeting.

Modeling Reinforcement
Session 2

This session took place one week after session 1. In most instances the same counselor met with the same subject. In some cases this was not possible and another counselor met with the subject. The format of this session was essentially the same as the previous session with the differences noted below.

A second model tape was presented in this session (Typescript Appendix B). On this tape the student had already carried out some of the behaviors discussed on the first tape. The counselor-client discussion followed closely the previous discussion. The client was reinforced for discussing relevant behavior which he had carried out between session 1 and 2. He was also reinforced for discussion of plans as in the previous session. This session also lasted for thirty minutes. The subjects were told that during the third week an interviewer would meet with them to discuss their previous two interviews and ask them a few questions.

Control Session 1

Each control counselor was given an instruction questionnaire (Appendix D). The subject was told that the interviewer wanted to talk to him about his school activities. The questionnaire form was used as a guide. Topics discussed varied and included job plans, athletic interests, and school interests. No selective reinforcement of any specific class of responses took place. No model tape was used. Each session lasted thirty minutes.

Control Session 2

This session took place one week after session 1. In most cases the same counselor met with each student. In some cases this was not possible and another counselor

met with the subject. The session was similar in format to session 1. In fact, this session was a continuation of session 1. Each session lasted thirty minutes.

Counselors

Eleven graduate students served as counselors. All were majoring in counseling and/or rehabilitation. Five of the students were candidates for the Master's degree, six were candidates for the doctorate. Four of the Master's candidates were taking a practicuum course and had this research experience integrated into the course. The other seven counselors were volunteers. Five of the students conducted experimental sessions. Five of the students conducted control sessions. One of the students conducted both control and experimental sessions.

Training Procedure

All counselors who conducted experimental sessions took part in pre-training sessions. Counselors were given a complete set of instructions and a copy of the model tape to be used. Counselors role played the sessions among themselves or with friends. Four of the students were members of a practicuum class as part of their graduate program. The experimenter role played a mentally retarded client while each of the four practiced their counselor roles. The experimenter was satisfied that each

of the four had mastered the correct techniques. The other two counselors practiced on their own. The experimenter discussed procedures with each until he was satisfied that each fully understood his role.

The experimenter met individually with all control interviewers. The procedure was carefully reviewed and each counselor was given a complete set of instructions.

The role, level and sex of counselors are presented in Table 3.6.

TABLE 3.6.--Role, Level and Sex of Counselors.

Role	Level	Sex
Experimenter	Master's	Male
Experimenter	Master's	Male
Experimenter	Master's	Male
Experimenter	Doctoral	Male
Experimenter	Doctoral	Male
Control	Doctoral	Male
Control	Doctoral	Male
Control	Doctoral	Male
Control	Doctoral	Male
Control	Master's	Male
Experimental/Control	Master's	Female

Criterion Interviewers

Five students served as interviewers. Two had served previously as counselors during the treatment sessions. Neither of the two saw any of the same students as counselors as they did as interviewers. All interviewers were graduate students. Two were Master's degree candidates in counseling, two were doctoral candidates in counseling, and one was a doctoral candidate in history. The criterion procedures were carefully reviewed with each interviewer prior to the actual rating interviews (Appendix E).

Level and sex of interviewers are presented in Table 3.7.

TABLE 3.7.--Level and Sex of Interviewers.

	Level	Sex
1	Doctoral	Female
2	Doctoral	Male
3	Doctoral	Male
4	Master's	Male*
5	Master's	Male**

*Also served as experimental counselor.
**Also served as control counselor.

Responsiveness Measure

Each experimental interviewer rated each subject on a bi-polar measure of responsiveness. The scale was set up as follows:

Responsive ____ ____ ____ ____ ____ ____ ____ Non-Responsive

Responsiveness was defined as cooperative, active, i.e., a "good subject." Each subject was rated twice, one at the end of each of two treatment or control sessions. The two responsiveness scores were summed, the possible range for each subject being 2-14 (the number 1 = most unresponsive, the number 7 = the most responsive). The variable of responsivity was correlated with each of the criterion variables. The experimenter thought that responsive subjects might behave differently with respect to the criterion variables that non-responsive subjects.

Criterion Measures

Vocational Planning Behaviors

Vocational Planning Behaviors (VPB) were defined as actual behaviors carried out with the intention of increasing one's occupation information. Examples: talking to someone about jobs, or reading a book about jobs. The subject's were given an opportunity to perform VPB within the school setting in two ways.

1. A pre-addressed postcard (Appendix G) Each subject was given a postcard at the end of the first interview. The subject was told that if he filled out the back of the card with his name and address and the names of the jobs that

he was interested in, he would be sent occupational information on those jobs. Each postcard received by the experimenter counted two points as a VPB. Occupational information on the jobs asked for was left at the school by the experimenter.

2. Handbook of Job Facts: This book was constructed by the experimenter. It consisted of descriptions of twenty different jobs. Each subject was told that the book was available at the school and would help him to learn about jobs. Each subject was asked to sign the book if he used it. Each subject signing the book was credited two points for a VPB.

Other behaviors were weighted and counted accordingly (Appendix G).

Vocational Interest Measure

This scale consisted of a list of thirty-five jobs. Each subject rated each job from 1-5 on the basis of the amount of interest he had in finding out more about the job. Jobs were selected to be realistic choice for the subject (see Appendix E).

Vocational Planning Strategies

Vocational Planning Strategies (VPS) were defined

as expression of knowledge of how to go about getting occupational information. This variable was measured during the criterion interview through the use of three structured stimuli situations (Appendix E).

Randomization

The subject's were assigned to groups on a random basis. Random assignment means that the probability of any given subject being assigned to a group is the same for all subjects.

Underwood (1957) states

> . . . on statistical grounds we have no better way of forming groups (which we wish to be statistically equivalent) than by assigning individual subjects to the groups on a random basis . . . if subjects are assigned at random differences in groups on any subject variable are highly improbable (p. 95).

Statistical Hypotheses

Null hypothesis 1. There is no difference between the experimental group and the control group on the variable of vocational planning strategies.

$$Ho: M1 = M2$$

Alternative hypothesis 1. The mean score of students who receive the treatment will be greater than the mean score of the subjects who receive the control procedure.

Ha:M1>M2

Null hypothesis 2. There is no difference between the experimental group and the control group on the variable of vocational planning behaviors.

Ho:M1=M2

Alternative hypothesis 2. The mean score of subjects who received the treatment will be greater than the mean score of the subjects who received the control procedure on variable of vocational planning behaviors.

Ao:M1>M2

Null hypothesis 3. There is no difference between the experimental group and the control group on the variable of vocational interest.

Ho:M1=M2

Alternative hypothesis 3. The mean score of subjects who received the treatment will be greater than the mean score of subjects who receive the control procedure on the variable of vocational interest.

Ao:M1>M2

Null hypothesis 4. There is no difference between the senior group and the junior group on the variable of vocational planning strategies.

Ho:M1=M2

Null hypothesis 5. There is no difference between the senior group and the junior group on the variable of vocational planning behaviors.

Ho:M1=M2

Null hypothesis 6. There is no difference between the senior group and the junior group on the variable of vocational interest.

Ho:M1=M2

Statistical Analysis

The basic analysis to be used is a two way analysis of variance (ANOVA) or treatment by levels design (Lindquist, 1953). In this design the treatment is administered to samples that have been matched with reference to a "control" variable or variables, in this case class in school. The design permits the experimenter to test for "interaction" i.e., whether or not the treatment is more effective at one level than another.

The assumptions of the ANOVA are as follows:

1. Observations are independent.
2. Variances within various sets are approximately equal.
3. Observations within experimentally homogeneous sets should be from normally distributed populations.

4. Contributions to total variances should be additive (Guilford, 1965).

The coefficient of correlation will be used to determine if the responsivity measure is related to any of the dependent variables.

Other data will be summarized and discussed descriptively. The 3600 computer was used in analyzing the main hypotheses. The level of significance was set at .05.

Summary

The purpose of the study was to investigate the information seeking behavior of a group of educable mentally retarded adolescents. The sample used consisted of fifty-six educable retarded students in a special high school. All students used were male. Subjects were divided into four groups: experimental-senior, experimental-junior, control-senior, and control-junior. Each group consisted of fourteen subjects.

Eleven graduate students were trained to serve as experimental counselors or control counselors. Five graduate students were trained to serve as criterion interviewers. Each counselor met with each subject twice. The experimental session consisted of a model plus verbal reinforcement by the experimenter of appropriate response of the subject. The control session consisted of a general interview. The interviewing was done in one interview session.

The main data analysis was done using an analysis of variance technique. Secondary analyses used coefficient of correlation and summary data. Level of significance was set at .05. The data was analyzed using the 3600 Computer.

The results of the study are reported in Chapter IV.

CHAPTER IV

ANALYSIS OF THE RESULTS

In this chapter the hypotheses will be restated and discussed in terms of their statistical outcomes. The main hypotheses were analyzed using a 2x2 analysis of variance design with equal cell frequencies and with counseling treatment and grade level as independent variables. Additional data will be presented and analyzed through the use of correlations and summary tables.

Experimental and Control Differences in Vocational Planning Strategies

Null hypothesis 1. There is no difference between the experimental group and the control group on the variable of Vocational Planning Strategies (VPS).

Ho:M1=M2

Alternative hypothesis 1. The mean score of subjects who receive the experimental treatment will be higher than the mean score of subjects who receive the control procedure on the variable of (VPS).

Ao:M1>M2

The "F" for treatment presented in Table 4.1 is significant at p=.013. This result indicates that there is a difference between the experimental and control groups on the variable of VPS. The null hypothesis is therefore rejected.

The "F" for interaction presented in table 4.1 is not significant. This result indicates that the treatment effect was independent of the class level of the subjects.

TABLE 4.1.--Analysis of Variance for Vocational Planning Strategies.

Source	Sum of Squares	DF	Mean Squares	F	p
Treatment	70.87	1	70.87	6.59	.013*
Level	0.45	1	0.45	0.04	.839
T x L	9.45	1	9.45	0.88	.353
Error	559.21	52	10.75		
Total	639.98	55			

*Significant < .05

Means for Hypothesis 1

The means and standard deviations for this hypothesis are presented in Table 4:2. The means presented here represent the number of ways of acquiring information about jobs that the subject could think of and express.

TABLE 4.2.--Means and Standard Deviations for Experimental and Control Groups on Vocational Planning Strategies.

Factor	N	M	S.D.
Treatment*			
Experimental	14	8.64	3.27
Control	14	6.39	3.12

*Significant (p=.013).

Experimental and Control Differences in Vocational Planning Behavior

Null hypothesis 2. There is no difference between the experimental group and the control group on the variable of Vocational Planning Behaviors (VPB).

Ho:M1=M2

Alternate hypotheses 2. The mean score of subjects who receive the experimental treatment will be higher than the mean score of subjects who receive the control procedure on the variable of VPB.

Ao:M1>M2

The "F" presented in Table 4.3 is significant at p = .001. This result indicates that there is a difference between the experimental and control groups on the variable of VPB. The null hypothesis is therefore rejected.

The "F" for interaction presented in Table 4.3 is not significant. This result indicates that the treatment effect was independent of the grade level of the subjects.

TABLE 4.3.--Analysis of Variance for Vocational Planning Behaviors.

Source	Sum of Squares	DF	Mean Squares	F	p
Treatment	75.45	1	75.45	11.66	.001*
Level	2.16	1	2.16	.33	.556
T x L	0.88	1	0.88	.14	.715
Error	336.36	52	6.47		
Total	414.84	55			

*Significant < .05

Means for Hypothesis 2

The means and standard deviations for this hypothesis are presented in Table 4.4. The mean score of VPB represents the weighted scores for the number of vocational behaviors that the subject actually performed.

Experimental and Control Differences on Vocational Interest

Null hypothesis 3. There is no difference between the experimental group and the control group on the variable of Vocational Interest (VI).

TABLE 4.4--Means and Standard Deviations for Experimental and Control Groups on Vocational Planning Behaviors.

Factor	N	M	S.D.
Treatment*			
Experimental	14	3.96	3.13
Control	14	1.64	1.35

*Significant (p=.001).

Ho:M1=M2

Alternative hypothesis 3. The mean score of subjects who receive the experimental treatment will be higher than the mean scores of subjects who receive the control procedure on the variable of VI.

Ao:M1>M2

The "F" for treatment presented in Table 4.5 is not significant. This result indicates that the difference between experimental control groups is likely to have occurred by chance.

The "F" for interaction shown in Table 4.5 is not significant. This result indicates that the combination of treatment and grade level did not produce an effect above that produced by the two variables acting indepently.

TABLE 4.5--Analysis of Variance for Vocational Interest Scores

Source	Sum of Squares	DF	Mean Squares	F	p
Treatment	73.14	1	73.12	0.17	.680
Level	1360.29	1	1360.29	3.19	.080
T x L	60.07	1	60.07	0.14	.709
Error	22137.86	52	425.73		
Total	22631.36	55			

Means for Hypothesis 3

The means and standard deviations for this hypothesis are shown in Table 4.6. The VI represents the total scores on the level of interest test.

TABLE 4.6--Means and Standard Deviations for Experimental and Control Groups on Vocational Interest.

Factor	N	M	S.D.
Treatment			
Experimental	14	85.75	19.63
Control	14	88.04	20.75

Grade Level Difference on Vocational Planning Strategies

Null hypothesis 4. There is no difference between seniors and juniors on VPS.

Ho:M1=M2

The "F" for grade level shown in Table 4.1 is not significant. This result indicates that the difference between seniors and juniors is likely to have occurred by chance.

Means for Hypothesis 4

The means and standard deviations for this hypothesis are presented in Table 4.7.

TABLE 4.7--Means and Standard Deviations for Seniors and Juniors on Vocational Planning Strategies.

Factor	N	M	S.D.
Level			
Seniors	14	7.43	2.97
Juniors	14	7.61	3.96

Grade Level Differences on Vocational Planning Behaviors

Null hypothesis 5. There is no difference between seniors and juniors on VPB.

Ho:M1=M2

The "F" for grade level presented in Table 4.3 is not significant. This result indicates that the difference between seniors and juniors is likely to have occurred by chance.

Means for Hypothesis 5

The means and standard deviations for this hypothesis are presented in Table 4.8.

TABLE 4.8--Means and Standard Deviations for Seniors and Juniors on Vocational Planning Behaviors.

Factor	N	M	S.D.
Level			
Seniors	14	3.00	3.08
Juniors	14	2.61	2.16

Grade Level Difference on Vocational Interest

Null hypothesis 6. There is no difference between seniors and juniors on VI.

Ho:M1=M2

The "F" for grade level presented in Table 4.5 is not significant. This result indicates that the difference between seniors and juniors is likely to have occurred by chance.

Means for Hypothesis 6

The means and standard deviations for this hypothesis are presented in Table 4.9.

TABLE 4.9--Means and Standard Deviations for Seniors and Juniors on Vocational Interest.

Factor	N	M	S.D.
Level			
Seniors	14	91.82	6.84
Juniors	14	81.96	26.92

Intercorrelations

The intercorrelations among four variables are presented in Table 4.10. These variables are Responsiveness, VPS, VPB, and VI. Two of the six correlations were significant. The significant correlations were those between Responsiveness and VPS, and that between VPS and VPB.

TABLE 4.10--Intercorrelations of Responsiveness, Vocational Planning Strategies, Vocational Planning Behaviors, and Vocational Interest.

	Resp.	VPS	VPB	VI
Resp.		.41*	.21	.07
VPS			.27*	.21
VPB				.15
VI				

*Significant at < .05 level.

Ranking of Jobs

The rank order of jobs listed in the vocational interest measure is presented in Table 4.11. The jobs were rated on the basis of "how interested are you in finding out about the job." The ratings were then converted into ranks. Six of the occupations appeared in the top ten ranks across all four groups. These jobs were: construction worker, truckdriver, carpenter, auto mechanic, factory worker, and bricklayer. Six occupations appeared in the lower ten ranks across the four groups. These jobs were: teacher, dishwasher, messenger, bookkeeper, library worker, and barber.

Summary

The main hypotheses were analyzed. An analysis of variance technique was used. Significance levels were set at .05. The following hypotheses were supported by the data.

1. The mean score of the experimental group was higher than the mean score of the control group on the variable of VPS.
2. The mean score of the experimental group was higher than the mean score of the control group on the variable of VPB.

The following hypotheses were not supported by the data.

3. The mean score of the experimental group was

TABLE 4.11.--Ranks of thirty-five occupations on vocational interest measure across four groups.

	Experimental Senior	Experimental Junior	Control Senior	Control Junior
1.	Construction Worker	Auto Mechanic	Factory Worker	Construction Worker
2.	Truck Driver	Construction Worker	Construction Worker	Truck Driver
3.	Carpenter	Factory Worker	Bricklayer	Factory Worker
4.	Telephone Repairman	Truck Driver	Machinist	Carpenter
5.	Auto Mechanic	Bricklayer	Carpenter	Machinist
6.	Janitor	Machinist	Truck Driver	Auto Mechanic
7.	Rancher	Carpenter	Auto Mechanic	Bricklayer
8.	Plumber	Telephone Repairman	Forester	Photographer
9.	Factory Worker	Fireman	Farmer	Plumber
10.	Bricklayer	Plumber	Rancher	Cook
11.	Forester	Janitor	Painter	Forester
12.	Painter	Farmer	Fireman	Painter
13.	Farmer	Forester	Plumber	Telephone Repairman
14.	Bank Teller	Photographer	Mail Carrier	Baker
15.	Bus Driver	Rancher	Janitor	Fireman
16.	Cook	Elevator Operator	Telephone Repairman	Cashier
17.	Machinist	Mail Carrier	Hospital Attendant	Farmer
18.	Baker	Painter	Meat Cutter	Elevator Operator
19.	Photographer	Usher	Bank Teller	Waiter
20.	Meat Cutter	Hotel Clerk	Cook	Janitor
21.	Hospital Attendant	Meat Cutter	Hotel Clerk	Salesman
22.	Usher	Salesman	Cashier	Meat Cutter
23.	Fireman	Bank Teller	Photographer	Usher
24.	Cashier	Hospital Attendant	Baker	Bus Driver
25.	Hotel Clerk	Cashier	Bookkeeper	Bank Teller
26.	Salesman	Baker	Messenger	Hospital Attendant
27.	Waiter	Teacher	Salesman	Mail Carrier
28.	Teacher	Cook	Usher	Messenger
29.	Elevator Operator	Messenger	Elevator Operator	Hotel Clerk
30.	Mail Carrier	Bus Driver	Bus Driver	Dishwasher
31.	Barber	Waiter	Waiter	Library Worker
32.	Dishwasher	Barber	Library Worker	Barber
33.	Messenger	Library Worker	Barber	Rancher
34.	Bookkeeper	Bookkeeper	Teacher	Bookkeeper
35.	Library Worker	Dishwasher	Dishwasher	Teacher

not higher than the mean score of the control group on the variable of VI.

4. There was no difference between seniors and juniors on VPS.
5. There was no difference between seniors and juniors on VPB.
6. There was no difference between seniors and juniors on VI.

The mean scores for the major analyses were presented. Data on the interaction analyses was presented. None of the "F" for interaction was significant.

The thirty-five occupations on the vocational interest measure were presented and briefly discussed.

Correlations between the responsiveness measure and the three criterion variables was presented.

CHAPTER V

SUMMARY, CONCLUSIONS, DISCUSSION, IMPLICATIONS FOR FUTURE PRACTICE, IMPLICATIONS FOR FUTURE RESEARCH

Summary

The general purpose of the study was to investigate the vocational planning behavior of a group of educable mentally retarded adolescents. The specific purpose was to compare the effectiveness of two vocational planning procedures with retarded eleventh and twelfth grade boys. One presentation was a model plus reinforcement counseling treatment, the other a structured interview control procedure. The criterion variables were performace of vocationally relevant behaviors, (VPB), knowledge of vocational planning strategies (VPS), and a vocational interest measure (VI).

The setting for the study was the Kent Occupational High School (KOHS) in Wyoming, Michigan. The school is a special high school for the educable mentally retarded and employs a work-study program of training.

The subjects used in the study were eleventh and twelfth grade boys from the school. Subjects were placed into two groups, juniors and seniors, and then randomly

assigned to experimental or control groups. The four groups were: experimental-senior, experimental-junior, control-senior, and control junior. The total sample was fifty-six with fourteen subjects in each group. The IQ range of the subjects was 58-82.

The experimental treatment consisted of the presentation of a model plus the verbal reinforcement by the counselor of responses of the client that were vocationally relevant. The control group received a general interview. Both experimental and control group sessions lasted thirty minutes.

Each experimental subject received two sessions of the treatment on consecutive weeks and was interviewed on the criterion variables during the third week. Each control subject received two sessions of the control procedure on consecutive weeks and was interviewed on the criterion variables on the third week. Three criterion variables were measured: vocational planning strategies, vocational planning behaviors and vocational interest.

Eleven graduate students served as counselors for the study. Five of them served in the experimental treatment, five in the control treatment and one worked in both treatments. All counselors were trained in the use of the appropriate procedures. Five graduate students served as interviewers on the criterion variables.

The basic hypotheses under investigation were:

1. Subjects who receive the experimental treatment will score higher on a measure of VPS than control subjects.
2. Subjects who receive the experimental treatment will score higher on a measure of VPB than control subjects.
3. Subjects who receive the experimental treatment will score higher on a measure of VI than control subjects.
4. There is a difference between seniors and juniors on VPS.
5. There is a difference between seniors and juniors on VPB.
6. There is a difference between seniors and juniors on VI.

The above hypotheses were tested using an analyses of variance technique.

Hypotheses one and two were supported by the data. This result indicated that there was a difference in the predicted direction dur to the treatment on the variables of VPS and VPB. Hypotheses three, four, five, six were not supported by the data. The null hypothesis was accepted in these cases. Additional data were analyzed using correlations and summary tables.

Conclusions

1. The model plus reinforcement counseling treatment was shown to increase VPS to a greater degree than the control procedure.
2. The model plus reinforcement counseling treatment was shown to increase VPB to a greater degree than the control procedure.
3. The model plus reinforcement treatment did not increase the VI scores when compared with the control procedure.
4. Class status did not make a difference on the variable of VPS.
5. Class status did not make a difference on variable of VPB.
6. Class status did not make a difference on variable of VI.
7. Two of the intercorrelations among measures were significant. These results were not hypothesized. The significant correlations were those between responsiveness and VPS, and between VPS and VPB.
8. The ranking of occupations seemed to follow a pattern. This pattern was not hypothesized. Occupations ranked high in interest involved physical labor and were "masculine" jobs. Occupations ranked low in interest involved menial work, low pay or abstract job duties. Examples of the former

are auto mechanic and truckdriver. Examples of the latter are teacher and barber.

Discussion

The major results of this study are consistent with the results of earlier studies on non-retarded populations (Krumboltz and Thoreson, 1964; Thoreson and Krumboltz, 1967). A treatment based on a model plus reinforcement counseling procedure did seem to increase the vocationally relevant behaviors of the subjects. The extension of the treatment to the educable mentally retarded is important because it extends our knowledge into a little known area.

The setting used was a school all of whose pupils are retarded. Many special educational settings integrate the non-retarded and the retarded in classes. Often the retarded are not provided with specialized individual and group vocational counseling sessions. Their choice of a job may be based on incomplete knowledge, a stereotype of a position or the impression that only a few kinds of jobs are open to them. The ranking of occupations in the present study on the VI measure points to a narrowness of vocational interest in the present sample. Results of the present study do show that VPB can be increased. We need more evidence on the effect of VPS and VPB on the eventual job choice process. It does seem clear that techniques such as the present treatment can be meaningfully integrated into special education settings.

Principles of behavior modification can play a role in the vocational counseling process with the retarded. Some studies i.e., Fudell (1963), Plotkin (1966) have shown that semester long occupational units can be effective in increasing occupational information. Perhaps units based on behavior modification techniques can be devised. Various kinds of verbal and/or concrete reinforcers can be tested to see how motivation of students to seek out information can be increased.

The use of modeling needs to be further explored to determine its effect of vocational behavior. The model treatment used in this study was a relatively restricted one. Perhaps occupational units presenting different kinds of models can prove effective in increasing the occupational information of the EMR. Studies such as Thoreson and Krumboltz (1968), and Krumboltz, Thoreson and Hosford, (1966) have shown that different kinds of models have different effects on subjects. The use of film and video tape may prove helpful. Perhaps local members of the community can be used as models. Further investigation is needed into the modeling process.

The ranking of occupations on VI has implications for vocational counseling with the retarded. The subjects were given a fixed list of occupations to rate. The jobs did differ on a number of dimensions such as prestige, salary, duties. Most of the occupations ranked high involved

physical labor and can be seen as masculine jobs. Some of the highly rated jobs do seem to be realistic choices for the subjects. Other jobs may merely have good images or stereotypes. The occupations rated low also differ on a number of dimensions. Some may seem menial, others may be unfamiliar to the subject. Some jobs like that of teacher may just seem undesirable. More research is needed into the perception of jobs by the EMR. We need to know what dimensions are seen as favorable or unfavorable to them.

The results on the variable of responsiveness may have important implications. It was found that students who were rated high on responsiveness tended to score high on the vocational strategies measure. This indicates that a personality factor, i.e., responsivity can have an effect on the subject's reaction to the treatment. Perhaps a treatment like the one used in the study is most effective with "responsive" clients while "non-responsive" clients react better to other kinds of treatment. Thoreson and Krumboltz (1968) have pointed out that some clients are more influenced by some modeling treatments than others. They also discuss the importance of client and counselor personality and its effect on counseling outcomes. It does seem true that the experimenter must take the personality into consideration in his design. Some treatments will work better with some students and less well with others.

Two of the correlations were significant, although the correlations were fairly low. Subjects who scores high on the responsiveness measure tended to score high on VPS. Subjects who scored high on VPS tended to score high on VPB. These relationships do make logical sense. A responsive or active subject can be empirically defined as one who acted interested and was cooperative during the treatment interview. It follows that this kind of subject would be likely to gain from the treatment and learn more vocational planning strategies. It also follows that a student who learns more VPS will be able to think of more ways to find out about jobs and have a better chance of acting upon them. He will have more possibilities to act upon. The correlations found to be significant in this study should be investigated further in follow up studies.

There are some issues of methodology that should be discussed. Individual treatment sessions were not tape recorded. This decision was based on the complexity of the organization of the study and the scheduling difficulties that were encountered. Hence, no rating could be carried out to determine how closely the counselors came to actually carrying out the treatment as planned. However the pretreatment sessions did prepare the counselors to carry out the appropriate procedures. Since no relevant alternative hypothesis seems plausible, the evidence points to the conclusion that the treatment sessions as

systematically carried out did increase the VPS and VPB.

Another issue is the verification of the subject's verbal reports. This issue seems resolved by looking at the nature of the VPB reported. Most VPB consisted of mailing in the pre-addressed postcard or using the occupational handbook in the school. In no case did a subject who reported carrying out either or these behaviors prove not to have carried it out.

Two main conclusions do seem justified, principles of learning are relevant in the design of procedures of vocational counseling with the retarded. A model plus reinforcement counseling treatment can be effective in increasing the vocational relevant behaviors of the retarded.

Implications for Future Practice

There are a number of implications of this study for counselors working with the retarded. There are a number of high school level special education programs that do not provide regular vocational counseling for the retarded. This study and others have shown that the retarded can meaningfully discuss vocational plans, organize their own vocational interests, and meaningfully take part in vocational exploration. These conclusions lead to the implication that wherever feasible, counseling programs for the retarded be set up in special education programs.

Secondly, it seems true that the retarded do work in a narrow number of occupations. There may be a number of reasons for this fact. One may be the attitudes and placement procedures of the counselors that work with the students. It seems that careful planning and counseling can help the retarded to expand their vocational horizons. Therefore, vocational counselors of the retarded should be open to a wide variety of job possibilities for their elients.

Thirdly, techniques of behavior modification seem not to be widely used on an organized basis with the mentally retarded. Counseling techniques with the retarded should be investigated so that information can be collected on which techniques lead to the best results with which clients. Certainly, the evidence from the present study implies that counselors of the retarded should be acquainted with principles of behavior modification as well as other approaches to voational counseling.

Implications for Future Research

Most research studies leave many questions unanswered. Some of the questions raised in this study and implications for future research will be discussed in this section.

The Kent Occupational High School may not be typical of many special education programs. The type of treatment used may be of different effectiveness in other settings. The study should be replicated in other settings.

Video tape presentations may be more effective than the audio tapes used in this study. Longer treatment periods may prove more effective. Different types of modeling procedures may give different results. In general, different types of treatment procedures should be investigated.

Due to practical considerations the individual treatment sessions were not taped. Hence specific typescripts of counselor-client interaction are not available. This information can be helpful in analyzing the vocational counseling process with teh retarded. Future studies should include some taping of individual sessions. Counselors might also be asked to fill out structured questionnaires on the important aspects of the treatment process.

Further investigation is needed into personality variables as they relate to the effectiveness of treatment. The present study shows that one variable i.e., responsitivity, can differentiate subjects in the way they respond to the treatment. Relevant personality variables should be built into future designs.

Research into theoretical aspects of the vocational development of the mentally retarded is needed. Little is known of this process. Longitudinal studies can help to answer relevant questions. Theory, research and practice must be integrated to help promote optimum career decisions in the retarded.

The perceptions of occupations by the retarded should be studied. Which occupations are most often chosen by the

retarded and why? Factors such as job knowledge, interests, and job values should be investigated to aid in the vocational counseling process with the retarded.

Investigation of the use of group procedures with the retarded is needed. There is some evidence that group procedures can be effective with the retarded. The dimensions of group counseling are different from those of individual counseling. The influence of the group on the individuals vocational behavior needs to be investigated.

Follow up studies are needed to determine if treatment effects are short lived. Perhaps treatment effects fade out in time. Meaningful ways of building on the present type of treatment need to be designed.

The present treatment used was a modeling plus reinforcement counseling procedure. Future studies should deal with these two treatment variables separately, to better differentiate the experimental effect of each.

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APPENDICES

APPENDIX A

RANDOMIZATION PROCEDURE

RANDOMIZATION PROCEDURE

The randomization procedure was carried out by someone unfamiliar with the specifics of the experimental design. Each subjects name was placed on a piece of paper. The slips were divided into two groups, seniors and juniors. The slips for the seniors were then randomly divided into two groups. The slips for the juniors were also randomly divided into two groups. A coin was flipped to determine which of the groups was to be designated as experimental or control. Four groups of fourteen subjects were thus set up.

APPENDIX B

MODEL TAPE TRANSCRIPTS

MODEL TAPE TRANSCRIPTS

Model Tape Session #1

Client: Hello Mr. Jones. . . . I've got some questions that I'd like to ask you. . . . I'm not sure just what kind of a job I should go into. I've got some ideas. . . . I'm really not sure. . . . Do you think you could help me?

Counselor: Well I hope so John . . . maybe you could tell me a little more about it.

Client: Well . . . I am interested in auto mechanics . . . and I would like to know more about jobs down at the hospital . . . my brother works down there.

Counselor: Uhm-um . . . yah those are two interesting kinds of work, maybe we could talk a little more about them.

Client: I would like to find out about the kind of training or schooling that is needed . . . I'd also like to know how much these jobs pay.

Counselor: Right, training and pay are real important and there are other things about jobs that I would like to talk about with you.

Client: Well . . . I probably could visit the hospital where I'd like to work and get some information. I guess there would be somebody there who could talk to me. I

guess I could also write to them for the information.

Counselor: Sounds like youve got a lot of good ideas. . . I especially like the one about visiting the hospital.

Client: I could go to the library and read some books on auto mechanics and hospital work . . . and dad said that Joe, down at the garage might let me watch while he works on a car.

Counselor: Uhm-um I think that other fellows have found that watching somebody actually doing his job is a good way to find out about the work.

Client: Yeh there certainly are a lot of ways that a guy can find out about jobs. Thanks a lot Mr. Jones, Im going to try out some of those ideas that you gave me.

Counselor: Well you're welcome John, and I hope they're helpful for you.

Model Tape Session #2

Client: Hello Mr. Jones . . . I guess you're wondering what I've been doing. I did get a chance to get some information. I think that I've learned some important things about jobs.

Counselor: Well fine . . . I'd like to talk about what you've learned with you.

Client: I did get a chance to find out some more about auto mechanics and hospital work . . . like we talked about.

Counselor: Uhm-um yeh those were the two jobs you were most interested in . . . and I'd like to find out . . . what you found . . . in terms of the jobs.

Client: And I guess there are a lot of things a guy should know about jobs . . . even besides the training and the money.

Counselor: Uhm-um jobs are pretty complex and like you say there are a lot of things you should know before picking one out.

Client: I went to the library and read about some of the jobs that I'm interested in. I also had a chance to visit the hospital and speak to two of the aides there.

Counselor: Uhm-um I bet that they were able to tell you a lot about the work that they do.

Client: I went to the garage and watched Joe the mechanic . . . I'd really like to be able to work on a car engine . . . and Joe told me a lot about his work.

Counselor: Right, Joe's been helpful before in this regard and I think watching him probably taught you a lot about mechanics.

Client: My teacher talked with me too. He knows a lot about jobs. He was able to suggest some things that I might try out. And I did get a chance to write away for information. I think I have a better idea about jobs now . . . Thanks a lot Mr. Jones.

Counselor: Umh-um Right John . . . I think that you've done a lot of work yourself and have collected a lot of information about jobs . . . see you next time then.

APPENDIX C

EXPERIMENTAL PROCEDURES

EXPERIMENTAL PROCEDURES

Experimental Session

Introduction: Hello I'm ____. I'd like to talk to you about what happens here at Kent Occupational High School. What we talk about here is between you and me. Your teachers will not find out about it. It has nothing to do with your grades. I know that in a year or so you'll be ready for your on the job training assignment. I think that our discussion will help you to decide just what kind of job you might like to go to.

I have a short section of a tape recording here. The student on the tape is a student at a school just like this one. Let's listen to some of his questions and plans. (Play tape) You can see that John has some questions about jobs and how to find out about them. We'll be talking about John's plans from time to time. Now I'd like to take with you about your job plans.

Are there one or more jobs that you are interested in? Discussion at this point should concern student's plans or lack of them and how he can find out more about jobs. Counselor can ask questions, suggest things to the student depending on student's own interview behavior. Ideally the

student will become more active as the interview continues. Counselor may ask: Have you worked on any job - What do you know about ____ (a job) - Do you know how to find out about jobs . . . Appropriate responses should be reinforced during the discussion.

Conclusion (final 10 minutes): Its almost time to stop now. I'd like you to listen to that short tape of John again. Play tape. Now let's review some of the ways that John intends to find out more about jobs. Lets look at this sheet. (Read - Write Observe - Visit Talk) Let's go over these now . . . (Go over them) What do you intend to do in the next week to find out more about jobs. . . (encourage subject to follow through) . . . I'll be back next week to talk with you again and see what you've done. To help you get more information with - Just fill out the back and drop it in the mailbox (explain procedure to student) . . . I'm also leaving a book about jobs in the school library . . . I'd like you to try to look at it this week . . . Theres a page in the front of the book where you should sign your name so I know who has read it. Be sure to sign your name on that page (Talk about book briefly). Thanks a lot . . . See you next week . . Interview should take thirty minutes.

Interview #2

Play model tape #2 . . . go on in same way . . Encourage student to send postcard and read job booklet if he hasn't

done so . . . Go over sheet, (Read. . Write . . .) At end encourage subject to follow through on his plans . . . Tell him that someone will talk with him briefly next week about what you've been talking about. Interview should take thirty minutes.

What to Reinforce

Statements to be reinforced should refer to information seeking behaviors or techniques. This may refer to past behavior, present plans or behavior, or future plans. These may be in the form of statements, questions, or suggestions. Some examples are:

I talked with my dad a lot about jobs.

I could read about jobs in the library.

Yesterday, I visited a hotel, and talked with the bellboy about his job.

I plan to watch the construction workers near home.

I'd like to learn more about jobs.

Statements on the model tape are also good examples. (Statements may not be as clearcut as those above - You can ask student to clarify and reinforce statements which approximate those desired)

Typical Reinforcers

The specific verbal reinforcers used will vary from experimenter to experimenter. Examples: Good; Good Idea; That sound fine; I'd like you to try that; That's probably the best way to do it. . .

Reinforcers should be delivered enthusiastically, showing real interest but not sounding artificial. Practicing in role playing should be a good way to get comfortable in the use of verbal reinforcers. After a while the reinforcers should come fairly naturally.

Ways To Find Out More About Jobs

Read a book about jobs.

Write to someone for facts about jobs.

Observe someone at work.

Visit a place to find out about jobs.

Talk to someone about jobs.

Ask student to give you an example for each of the above.

Ask him to think other ways if he can.

APPENDIX D

CONTROL PROCEDURES

CONTROL PROCEDURES

Questionnaire for Control Group

Interviewer:

Date:

Name of Student:

Grade level:

Classes student may be taking:

Shop ____	Gyn ____
Pre - OJT ____	Driver Education ____
Home economics ____	Music ____
History ____	Glee Club ____
English ____	Swimming ____
Math ____	Home and Family ____
	Custodian Training ____

Ask student which classes he is taking - which classes he likes best or least - talk about what happens in the classes (this discussion can continue for most of the period)

Comments:

Interview #1

Interview #2

Interview #1:

Responsive ____ ____ ____ ____ ____ ____ ____ Unresponsive

Interview #2:

Responsive ____ ____ ____ ____ ____ ____ ____ Unresponsive

Be sure to fill out the ratings after each interview.

Tell subject that your discussion will not affect their grades - its just for your information (for a paper, a project etc.) Each interview should take thirty minutes. Remember this is the control group. No selective reinforcement of any kind of statement should take place. Try to appear generally and genuinely interested in the student. Some job discussion can take place but should only be part of the general discussion. The purpose of the control group session is to involve the student in a short discussion of his school and his feelings about it - you can handle the discussion any way that is comfortable to you . . .

Interview #1

After approximately twenty minutes E. says . . . some of what we've been talking about has been related to OJT and jobs - you're probably interested in lots of jobs - I'd like to give you a chance to find out more about jobs - out time is almost up today - so I have two each ways for you to find out about jobs - here is a postcard with an address on it, that person works at Michigan State University

and knows a lot about jobs - If you will fill in the back (after the interview) and drop it in the mailbox you'll get information sent to you on the jobs that you've listed (explain procedure to student) - Also a booklet on job facts has been placed down in the library - There is a lot of job information in the book - There are also pictures of people on the jobs - I'd like you to look at it sometime this week - Be sure to sign you name on the first page (explain procedure) OK thanks, see you next week

Interview #2

Begin anywhere that seem appropriate. Ask about postcard and booklet . . . . Some additional questions you might ask: What sports do you like . . . . Are you on any teams here at school . . . what jobs would you like to work at . . . what school were you at before . . . how did you like that school . . . what are your hobbies . .

At end of second interview tell subject that somebody will be meeting with him the following week for a short time . . . to complete the interview.

APPENDIX E

CRITERION BEHAVIOR SCALES

CRITERION BEHAVIOR SCALES

Criterion Behaviors Interview Sheets

1. Vocational Strategies

Interviewer: Hello Im Mr. ____ Im interested in talking to you for a few minutes Im interested in your school, what goes on here and how you feel about it Im also interested in talking with you a little about jobs. I know that you talked with Mr. ____ during the last two weeks. . Do you remember Mr. ____ Present structured stimuli - Interviewer discusses them with subject and gives him time to answer . . . Interviewer does not suggest or give examples but encourages student and says things like . . . lets take the first job, how can you find out more about it . . . Interviewer moves on to next section when he feels that subject has mentioned all the strategies that he can think of for three stimulus situations.

2. Vocational Behaviors

Interviewer: OK now I'd like to talk with you about what youve done in the last two weeks to find out more about jobs. You talked with Mr. ____ twice What have you done since then to find out more about jobs? Interviewer writes down behaviors carried out and tries to get as much specific information as possible so that checks can be made on the

information. As in #1 interviewer does not suggest or give examples but allows subject to relate his behaviors freely.

3. Use interest measure as written

Vocational Behaviors Sheet

Record information seeking behaviors here - Note what behavior was, who was involved (parent, teacher etc.), when it occurred and what subject learned from it - An attempt will be made to check on the validity of behaviors - Be as specific as possible.

1.

2.

3.

4.

5.

6.

Vocational Strategies

John is a student at a school like Kent Occupational High School. He is interested in learning about the job of COOK. What can he do to find out more about this job?

____

____

____

____

Bill is interested in learning about the job of AUTO MECHANIC. What can he do to find out more about that job?

____

____

____

____

Larry is interested in learning about the job of HOTEL CLERK. What can he do to find out more about that job?

____

____

____

____

Measure of Level of Interest

Directions - On the next page are a number of jobs that you may be interested in learning more about. As I read the name of the job to you please tell me which number best applies to that job. The number will tell me how interested you are in getting more information about that job.

The numbers are:

1 = I am not interested at all

2 = I don't have much interest

3 = I am undecided

4 = I am moderately interested

5 = I am very interested

For example, if you are very interested in finding out more about the job of auto mechanic that would get a "5", if you don't have much interest in finding out about the job of bookkeeper that would get a "2". Each job will be read to you and you will be given a chance to indicate your interest for each. The interviewer will answer any questions that you have and will help you in any way that he can. Thank you.

Measure of Level of Interest

Auto Mechanic
Bookkeeper
Salesman
Bricklayer
Forester
Mail Carrier
Waiter
Bus Driver
Barber
Farmer
Baker
Janitor
Elevator Operator
Messenger
Factory Worker
Construction Worker
Meat Cutter
Cook
Painter
Usher
Ranchman
Teacher
Library Worker
Photographer
Cashier
Telephone Repairman
Fireman
Hospital Attendant
Carpenter
Plumber
Truckdriver
Machinist
Hotel Clerk
Bank Teller
Dishwasher

APPENDIX F

SAMPLE OF POSTCARD

Sample of Postcard

I'm interested in finding out about the following jobs:

(Name of job) _____

_____

_____

Please send me information about them.

(Name and address) _____

_____

_____

APPENDIX G

WEIGHTING OF VOCATIONAL PLANNING BEHAVIORS

WEIGHTING OF VOCATIONAL PLANNING BEHAVIORS

Weighting of Criterion Behaviors

The following are probable criterion behaviors that will occur: Talking (includes phone calls), Reading, Observing, Visiting, Writing.

Behaviors will be weighted as follows:

Talking to teacher or other staff member	= 1	
Talking to friend	= 1	
Talking to parent	= 1	Phone call to
Talking to relative	= 1	any of these
Talking to worker	= 1	people = 2
Reading booklet at Kent School	= 2	
Reading any book at library	= 2	(per book)
Reading any book at home	= 2	
Observing worker doing a job	= 2	
Visiting a job site	= 3	
Visiting an employment agency	= 3	
Writing - post card to Dr. Johnson	= 2	
Writing on his own to anyone	= 3	

All behaviors should be listed as specifically as possible -

Example - What is name of book read?

What did subject discuss with father?

When did behavior occur?

Some behaviors will be followed up to check on their validity.

If no weight has been assigned to a behavior, list it specifically - it will be weighted by an independent rater.

Some subjects may have part time jobs. Behaviors in connection with these jobs should be rated on the same basis as other behaviors.

APPENDIX H

EXAMPLES FROM HANDBOOK OF JOB FACTS

EXAMPLES FROM HANDBOOK OF JOB FACTS

Auto Mechanic

Where does he work - In a repair shop or garage.

What does he do - Finds mechanical problems in cars and repairs them.

What schooling or training does he need - A high school diploma is helpful - Much training is on the job.

What skills are needed - Mechanical skill is needed - Worker must be able to get along with people - Worker must enjoy working with cars.

Are there jobs available - Yes

What is the level of pay - Good

How to find out more about the job - Visit a local garage - Send postcard to Dr. Johnson at Michigan State University.

Janitor

Where does he work - In office buildings and institutions like schools and hospitals.

What does he do - Cleans floors and walls - Keeps heat and air conditioning working - may provide maintenance work.

What schooling or traing is needed - High school degree helpful - On the job training may be provided.

What skills are needed - May have to operate cleaning machines - May have to make minor repairs - May have to work nights.

Are there jobs available - Yes

What is level of pay - Fair

How to find out more about the job - Talk to janitors - Visit, write, or phone local employment office - Send postcard to Dr. Johnson at Michigan State University.

APPENDIX I

RAW DATA

TABLE I.1.--Raw Data for Experimental Seniors.

Subjects	Responsivity	VPS	VPB	VI (TOTAL)
1	5	7	10	94
2	6	3	1	69
3	6	1	2	77
4	12	10	0	100
5	14	9	5	105
6	14	9	4	46
7	12	7	1	107
8	10	10	7	112
9	11	12	4	84
10	10	8	1	109
11	9	8	2	86
12	10	6	4	96
13	13	12	14	105
14	14	12	5	94

TABLE I.2.--Raw Data for Experimental Juniors.

Subjects	Responsivity	VPS	VPB	VI (TOTAL)
1	12	8	4	111
2	4	4	2	43
3	13	2	2	71
4	8	8	3	87
5	8	12	8	107
6	9	9	4	39
7	11	6	0	77
8	14	9	2	69
9	8	12	4	84
10	12	13	9	91
11	10	12	2	66
12	12	8	4	81
13	12	13	3	82
14	12	12	4	109

TABLE I.3.--Raw Data for Control Seniors.

Subjects	Responsivity	VPS	VPB	VI (TOTAL)
1	12	12	2	119
2	13	3	4	82
3	14	5	1	83
4	8	6	0	94
5	14	6	4	90
6	11	5	0	110
7	8	3	0	98
8	8	5	2	138
9	10	9	2	90
10	12	7	2	46
11	13	7	1	94
12	13	9	3	87
13	11	11	1	101
14	12	6	2	55

TABLE I.4.--Raw Data for Control Juniors.

Subjects	Responsivity	VPS	VPB	VI (TOTAL)
1	9	4	0	83
2	13	5	4	83
3	9	6	0	84
4	11	11	1	87
5	11	10	2	75
6	11	4	4	113
7	8	0	0	52
8	12	6	0	93
9	14	11	0	103
10	14	12	4	75
11	3	6	0	103
12	11	5	3	55
13	7	3	0	108
14	3	2	0	64