AN APPLICATION OF THE THEORY OF WORK ADJUSTMENT TO VOCATIONAL COUNSELING IN A REHABILITATION AGENCY

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This is to certify that the

thesis entitled

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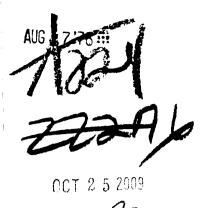
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ABSTRACT

AN APPLICATION OF THE THEORY OF WORK ADJUSTMENT TO VOCATIONAL COUNSELING IN A REHABILITATION AGENCY

Ву

David Vandergoot

The Rehabilitation Act of 1973 has created two issues for the state-federal system of rehabilitation. The first issue is the requirement that clients participate fully in the development of their vocational goals and rehabilitation programs. The second issue relates to the need to develop adequate standards for agency performance and the accurate measurement of these standards. This study attempted to address these issues.

An application of the Theory of Work Adjustment was developed to provide agency counselors with a vocational counseling tool that could be individually administered to clients. This application, the Learning Unit, was programmed and designed so that clients with poorer reading levels could also use it. The Learning Unit attempted to give clients a rationale for participating in vocational counseling and knowledge of the basic concepts of the Theory of Work Adjustment, namely, that clients should consider their own needs according to the rewards jobs might offer them, and consider their skills according to what skills jobs demand of them. Clients were then led through a structured sequence that helped them develop job goals or expand existing job goals which

implemented their needs and skills. A client/counselor interaction was built into the conclusion of the Learning Unit.

Counselors from four district offices of Vocational Rehabilitation
Services in the State of Michigan were asked to volunteer as participants. Fifteen counselors did so. Volunteer and non-volunteer counselors were compared on demographic, employment, and job placement activity variables. No essential differences were apparent. Volunteer counselors were asked to nominate four clients from each of their caseloads who were in need of vocational counseling. Two of these clients were randomly assigned to the Experimental Group which received the Learning Unit, and two were assigned to the Control Group which received traditional counseling experiences. A total of sixty clients were equally divided between the treatment conditions. Groups were compared on relevant demographic variables and no significant differences were found which suggested the effectiveness of randomization procedures.

The criteria variables used for this study were client job-seeking behaviors which occurred after vocational counseling and three separate measures of outcome which had been developed for rehabilitation. Two of these outcome measures were completed by counselors at different stages of the rehabilitation process and one was solicited from clients in a telephone structured interview approximately seven weeks following treatment exposure. Also collected from clients during the structured interview were data regarding their job-seeking activities, including job placement and data regarding their satisfaction with their vocational counseling experiences. Follow-up data were not obtained from two clients of each condition and were excluded from the research.

A preliminary investigation indicated that the Learning Unit did

teach concepts associated with the Theory of Work Adjustment, and that it also systematically reflected clients' need profiles parallel to the profiles generated by an instrument validated on the Theory. Thus, the Learning Unit was an application of the Theory of Work Adjustment.

A client knowledge check did distinguish between the Experimental and Control groups on knowledge of Theory concepts immediately following treatment exposure. However, this knowledge differential was not maintained over follow-up, nor did the Learning Unit generate greater amounts of client job-seeking activities than the traditional counseling procedures. Clients exposed to the Learning Unit also did not proceed through the rehabilitation process at a quicker rate than the control clients, nor did they indicate greater levels of satisfaction with vocational counseling. The overall impact of the Learning Unit on subsequent client activity was quite weak. Several factors could have contributed to this overall result. Recessionary economic conditions and a failure to systematically assess and teach job-seeking behaviors were possibly the prominant factors precluding positive results. In spite of this overall negative result, counselors generally rated the Learning Unit positively, enjoyed using it and would have continued to use it.

The various outcome measures used all showed little relationship to client job-seeking behaviors. Outcome as reported by clients did not show much relationship to outcome as reported by their counselors, although counselor perceptions of client potential outcome measured early in the process were related to their ratings outcome later in the process. This finding suggested that counselors saw outcome consistently different than clients and that counselors might have been more influenced by other client variables than those that actually related to

client gain. Client gain in employment was most related to client demographic variables such as age, age at disablement, and presence of secondary disabilities. Finally, client job obtainment was not related to client knowledge and use of occupational information, client satisfaction with counseling, or client/counselor agreement regarding the client's chosen job goals. Implications for outcome research were that counseling process and outcome factors were quite independent and, thus, any subsequent evaluative research of counseling must contain multivariate measurements that are specifically geared to measure the diversity of outcomes that accrue from a diversity of counseling services. Implications for counseling practice were that counselors must carefully assess client needs and plan specific interventions to meet those needs. Also, counselors must be aware that gains in one area do not imply that clients gain in other areas.

AN APPLICATION OF THE THEORY OF WORK ADJUSTMENT TO VOCATIONAL COUNSELING IN A REHABILITATION AGENCY

Вy

David Vandergoot

A DISSERTATION

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1975

To my wife and daughter

To my parents

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CHAPTER I

INTRODUCTION

Introductory Statement

The field of vocational rehabilitation, since its inception over fifty years ago, has been concerned with providing services to people with disabilities. The intent of these services is to enable clients to participate in society to the fullest extent of their choice. People with disabilities have been traditionally defined as persons with mental or physical conditions that pose a handicap to employment. People eligible for services from the state/federal system of vocational rehabilitation are those whose handicaps are amenable to services such that they can assume satisfying employment consistent with their abilities. The Rehabilitation Act of 1973 has extended this eligibility to persons with severe disabilities who were not eligible under previous legisla-The employment goals were basically left unchanged, however. The Rehabilitation Act of 1973 has also mandated that rehabilitation clients participate mutually with their counselors in planning for their own services. Subsequent regulations have set forth guidelines as to how agency counselors are to comply with this mandate.

These new emphases for vocational rehabilitation have created strains within the system. Counselors are required to work with certain disability groups with which they are unfamiliar. These groups are also

expectedly difficult to rehabilitate, not only because of the severity of their disabilities, but also because society is not yet prepared to absorb them into regular employment channels. The current economic situation with its attendant unemployment problem provides further restrictions and frustrations for clients and counselors alike. Add to this the regulations regarding total client participation in their rehabilitation process and it becomes obvious to those associated with the state/federal system that counselors need counseling tools that will help them meet the challenges presented by the Rehabilitation Act of 1973.

Statement of the Problem

Rehabilitation counselors working within the state/federal system have acknowledged the frustration of meeting the requirements of the new legislation. The Rehabilitation Services Administration of the Department of Health, Education, and Welfare of the Federal Government has responded to this problem by funding projects to develop materials and training programs that will enable counselors to effectively rehabilitate their clients. Although not a recipient of this funding, the research reported here is a similar attempt to develop and experimentally test a counseling innovation that is intended to help counselors meet the challenges of the new legislation.

Informal discussions with counselors indicate that they are basically interested in:

- procedures that provide counselors with a way to involve clients in developing service plans;
- procedures that are economical and efficient in terms of cost and time;

3. procedures that provide direction for the development of ongoing services resulting in eventual vocational placement for clients.

These guidelines were considered in the development and implementation of the counseling device subjected to experimental study by this research project. The challenges associated with the idealistic mandates of the Rehabilitation Act of 1973 demand immediate response in the development and validation of such devices. The major focus of all such activity is the advancement of the employment potential of rehabilitation clients.

It has often been observed that job opportunities for rehabilitation clients are often of low status. It is not the intent of this study to help clients be more satisfied with low status jobs. Rather, this study will attempt to investigate one approach that may enable clients and counselors to mutually consider client and environmental variables that will result in a satisfying placement of the client's choice, regardless of the occupational status accorded to the job by society.

Need for the Study

A traditional issue regarding the rehabilitation counselor's role in the state/federal system has been whether the rehabilitation counselor is, in fact, a counselor. Some maintain the counselor is a person who, by individual or group interviewing, guides the client through the rehabilitation process. Others view the rehabilitation counselor as a person who manages or coordinates all the necessary services for the client without exclusively relying on interviewing (Moses and Patterson,

1971; part II). In reality, however, most counselors would maintain that the functions of counseling and coordinating are both necessary components of successful rehabilitation service delivery. The new legislative mandates, laudable as they are, require possibly greater amounts of both these activities than ever before. New techniques and materials are needed to help counselors perform their counseling and coordinating tasks.

A further mandate of the Rehabilitation Act of 1973 requires that the system be accountable. The success of the state/federal rehabilitation system is basically measured in terms of the successful vocational placement of clients. The facilitator of this process is the rehabilitation counselor. Counselors must bear the brunt then, of meeting accountability standards. It is not surprising for counselors to become concerned about efficient methods of delivering services. This concern for efficient service delivery systems is a researchable matter and an end to which this project is directed.

Fortunately, there is theory and technology currently existing which can guide the development of service delivery systems. Concurrent with the new emphases in rehabilitation has been society's growing concern regarding the inability of our educational institutions to provide adequate preparation to students to enable them to attain their potential via their career development. The guidance and counseling field has responded with the concept of career education. The emphases of career education include a mobilization of resources to help people orient adequately to their eventual careers. Vocational satisfaction is the intended outcome (Hoyt, 1974). Such is also the intended outcome of rehabilitation.

John L. Holland, a leader in the field of counseling psychology, has described the type of counseling device that he believes is desirable as one means of helping people prepare for satisfying careers (Holland, 1974). Such a device would have a strong basis in theory. Its format would be self-instructional to minimize the amount of unnecessary counselor time. It would include structure for individual self-assessment. It would also be relatively inexpensive in terms of the relevant output to consumers of the device.

Holland has developed one instrument, the <u>Self-Directed Search</u> (1971), as an application of his recommended format. The field of rehabilitation, however, has contributed a theory of work adjustment developed by the Minnesota Studies in Vocational Rehabilitation (Dawis, Lofquist, and Weiss, 1968). This theory may provide the theoretical basis and research for a more appropriate application to rehabilitation than Holland's since it grew from a rehabilitation framework. The Theory of Work Adjustment will be described in the literature review of Chapter II.

This current study reflects an attempt to develop an application of the Theory of Work Adjustment that parallels Holland's recommended format, and to study its effect on the outcome of vocational counseling that occur as a result of the interaction between counselors and clients in the state/federal rehabilitation system.

It is anticipated that such an application could help counselors successfully meet the mandates contained in the Rehabilitation Act of 1973 in two ways. Specifically, this study will develop and evaluate a counseling application of the Theory of Work Adjustment that may help counselors work more effectively with clients in the development of their rehabilitation plans. Secondly, this study will analyze client

demographic variables as well as counseling process and outcome variables, to determine what relationships exist among them. Such an analysis may contribute knowledge towards the formation of accountability standards in rehabilitation counseling.

Questions to be Addressed by this Study

The following questions serve to focus the basic research intent of this study:

- 1. Can a structured, programmed format, guiding clients in the development of job goals, result in more job-seeking interest and activity than what typically results from traditional vocational counseling?
- 2. Can this structured, programmed counseling device decrease the amount of time needed to move clients through the rehabilitation process?
- 3. Can this counseling device teach certain concepts to clients regarding successful work adjustment, and if so, can such knowledge be maintained over time?
 - 4. Can such a counseling device increase the benefits clients receive from rehabilitation services?
 - 5. How do the various outcome measures relate to one another?

 What factors are associated with higher levels of client jobseeking interest and activity?

CHAPTER II

SURVEY OF THE LITERATURE

Introductory Statement

In accord with the stated purposes of this study which are to investigate the utility of an application of the Theory of Work Adjustment to vocational counseling in rehabilitation, and secondly, to contribute knowledge towards the formation of outcome measurement standards in rehabilitation counseling, two areas of rehabilitation literature were surveyed. The first concerns the notion of work adjustment. The second concerns the literature developed within the field of rehabilitation regarding the problem of client outcome measurement.

A final review is included which surveys literature pertaining to the format of learning devices. A rationale is presented for the development of the Learning Unit (Appendix A) used as the counseling innovation researched by this project.

Work Adjustment

Work adjustment is not a new term for rehabilitation counselors. However, inspection of the literature reveals a degree of confusion as to what work adjustment actually means (Ross and Branden, 1971). Hoffman (1970) defines work adjustment as

...a process of utilizing work under professional counseling and supervision to modify behavior. It is a process developed and utilized mainly in sheltered workshops. It is utilized for individuals who display inappropriate work habits, negative attitudes towards work, inability to relate to supervisors and peers adequately, low frustration tolerance and other factors of the work personality which interfere with their entering into training or job placement. (p. 9)

In Hoffman's context work adjustment is used as a series of services that is applied to a person with deficits relating to work behaviors. Most rehabilitation counselors would perceive this to be an adequate description of work adjustment. It is common procedure for a counselor to refer a client to a rehabilitation facility for work adjustment subsequent to a work evaluation which provides direction for the adjustment program (Gellman, 1970).

Sankovsky (1971) and Gellman (1970) view work adjustment as a component of a greater adjustment system. Sankovsky refers to rehabilitation adjustment which includes personal, social, and work adjustment while Gellman refers to a model where work evaluation and work adjustment are simultaneous processes. Most rehabilitation facilities would include these aspects in their overall service package.

Thus, the field of rehabilitation typically refers to the work adjustment process as occurring within the confines of a rehabilitation facility, such as a sheltered workshop. This model was implemented and popularized in the early 1950's by the Chicago Jewish Vocational Services which has primarily a workshop orientation (Gellman, Gendel, Glaser, Friedman and Neff, 1957). Such a model attempts to re-create an actual work situation. The only assumed difference being that client remediation is encouraged within the setting until the client achieves

employability standards. Work is typically subcontracted from actual industries in the community. This model is dependant on the ability of the rehabilitation facility to know, re-create, and measure actual employment criteria as used by society. It is necessary to apply more than just production criteria within such a model.

This model has been updated, utilizing behavior change principles such as reinforcement to teach clients to assume a work role (O'Toole and Campbell, 1971; Eink, 1971). All of these models assume that a common work role exists across occupations. Usually, little mention is made as to how client personality variables are assessed, or even how value and need systems of clients are considered in relation to eventual outcomes.

Such models of work adjustment have become institutionalized within the field. The Tenth Institute on Rehabilitation Services has suggested how the state/federal rehabilitation system should interact with work adjustment facilities to better adjust clients. Extensive guidelines were developed regarding, for example, referral procedures, facility staffing, report writing, and outcome criteria, among others (U.S. Department of Health, Education and Welfare, Rehabilitation Services Administration, 1972). This model became further solidifed within the field when the Vocational Evaluation and Work Adjustment Association (VEWAA) formally adopted the definition of work adjustment proposed by the Tenth Institute. This definition is attributed to Paul Hoffman and is as follows:

Work adjustment is a treatment/training process utilizing individual and group work, or work related activities, to assist individuals in understanding the meaning, value, and demands of work; to modify or develop attitudes, personal characteristics, and work behavior; and to develop functional capacities, as required, in order to assist individuals toward their optimum level of vocational development (Smolkin, 1973).

Finally, further evidence of the institutionalization of this model appears in the accreditation standards of the Commission on Accreditation of Renabilitation Facilities (1975). A definition of work adjustment is presented in the standards similar to the one accepted by VEWAA. The following list of service emphases is provided as the component parts of work adjustment (p. 2):

- physical capacities
- psychomotor skills
- interpersonal and communicative skills
- work habits
- appropriate dress and grooming
- job-seeking skills
- productive skills
- orientation to work practices
- work-related skills

This list of services highlights that the intent of such a model is to impart skills to people who have skill deficits in work-related areas, in order to enable them to become productive in work activity to the extent of their potential. Although within most of the definitions of work adjustment acknowledgement is given to personal characteristics of clients, little concrete evidence is available in the literature of work adjustment. This seems to suggest that less time and technology is expended on helping clients define and implement their own needs and values towards more suitable employment than in developing work-related skills.

If the typical array of work adjustment services could be supplemented by a careful analysis and implementation of the needs and values of clients, more successful and stable outcomes might occur for clients.

The Theory of Work Adjustment has attempted to combine the skill-developing component of work adjustment with the need-analysis component. The theory has been succinctly described as follows:

Proposition I. An individual's work adjustment at any point in time is indicated by his concurrent levels of satisfactoriness and satisfaction.

Proposition II. Satisfactoriness is a function of the correspondence between an individual's abilities and the ability requirements of the work environment, provided that the individual's needs correspond with the reinforcer system of the work environment.

Corollary IIa. Knowledge of an individual's abilities and of his satisfactoriness permits the determination of the effective ability requirements of the work environment.

Corollary IIb. Knowledge of the ability requirements of the work environment and of an individual's satisfactoriness permits the inference of an individual's abilities.

Proposition III. Satisfaction is a function of the correspondence between the reinforcer system of the work environment and the individual's needs, provided that the individual's abilities correspond with the ability requirements of the work environment.

Corollary IIIa. Knowledge of an individual's needs and of his satisfaction permits the determination of the effective reinforcer system of the work environment for the individual.

Corollary IIIb. Knowledge of the reinforcer system of the work environment and of an individual's satisfaction permits the inference of an individual's needs.

Proposition IV. Satisfaction moderates the functional relationship between satisfactoriness and ability-requirement correspondence.

Proposition V. Satisfactoriness moderates the functional relationship between satisfaction and need-reinforcer correspondence.

Proposition VI. The probability of an individual being forced out of the work environment is inversely related to his satisfactoriness.

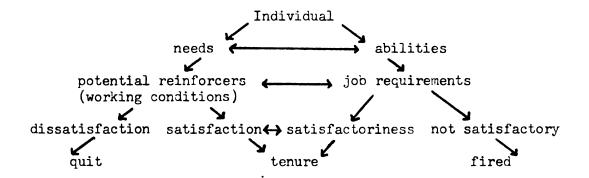
Proposition VII. The probability of an individual voluntarily leaving the work environment is inversely related to his satisfaction.

Proposition VIII. Tenure is a joint function of satisfactoriness and satisfaction.

Corollary VIIIa. Tenure is a function of ability-requirement and need-reinforcer correspondence.

Proposition IX. Work personality-work environment correspondence increases as a function of tenure (Dawis, Lofquist and Weiss, 1968; pp. 9-11).

Schematically, the theory can be diagrammed thusly:



It is important to recognize tenure as synonomous with the placement end goal of most rehabilitation clients. It is intended that
rehabilitated clients maintain their employment status over an extended
period of time.

The Minnesota Theory of Work Adjustment contains distinct differences that may be essential for rehabilitation practice. As is evident, the concepts of Hoffman, Sankovsky, and Gellman reflect that work adjustment is a service component of the rehabilitation process. It is noted that the major concern of these adjustment services is behavior and attitude change that will enhance the satisfactoriness of clients for

eventual employment. Such changes can be engineered within a rehabilitation facility which typically utilizes a variety of techniques such as job-task simulations, institutional work stations typically associated with blue-collar or service oriented jobs, or piecework subcontracted from local industry. Only occasionally do clients obtain onthe-job tryouts or evaluations which expose them to more varied and realistic occupational experiences. Thus, it would seem that the more traditional concept of work adjustment is mainly concerned with behavior and attitude change with the emphasis being to develop satisfactoriness potential in a client on a limited number of jobs that may, hopefully, generalize to whatever jobs become available to the client.

The Minnesota concept expands upon this traditional view and emphasizes that work adjustment takes place after a person is placed on a job and is dependent on the worker's satisfactions as well as satisfactori-This model would suggest that the term "work adjustment" be applied in the rehabilitation process after placement has occurred and be removed from the service delivery context prior to placement. Work attitude and work behavior changes are better described using behavior modification descriptors, and are clearly related to developing satisfactoriness. Satisfaction can be given its due emphasis within service delivery by enhancing the job readiness of clients in terms of their knowledge of their own needs and rewards system, as well as knowledge of occupations that may have potential for satisfying needs and providing rewards. The rehabilitation counselor can be the facilitator who exposes the client to the entire system. The counselor makes sure the client has sufficient information to fully participate in the decision-making process which determines the most appropriate and desirable service and

placement for the client.

The Rehabilitation Act of 1973 and subsequent regulations governing this act clearly mandates that opportunities be provided for clients to actively participate in the formation of plans for their rehabilitation services and outcomes. This is more than an idealistic platitude. Recent research indicates that rehabilitation counselors often may not have adequate perceptions of the needs of their clients (McGraw and Bitter, 1974). If counselors cannot adequately assess such important client aspects, better techniques must be developed to increase the quality of the counselor/client interaction. It can be anticipated that a more complete assessment done jointly by counselor and client can improve the quality of rehabilitation planning and outcome. Also, in response to the Act of 1973, there is a need for increasing the emphasis on the rehabilitation counselor as a vocational expert (Galvin, 1974). This emphasis mandates the development of new methods and instruments that can enable counselors to increase their level of expertise.

Currently, methodologies do exist which focus on the interaction between client and counselor. Job readiness preparation programs are good examples. Notable ones are those developed by the Minneapolis Rehabilitation Center (MRC) (Anderson and Hutchinson, 1968), the Human Resources Research Organization (Osborn et al., 1972), and Vocational Exploration Groups as developed by Daane (1972). McClure (1972) experimented with a version of the MRC program and demonstrated a positive effect within the treatment group compared to a control group. The criteria he used were placement, time required to find jobs, and counselor time expended in the client's behalf. Cuony and Hoppock (1954) long ago demonstrated that job readiness preparation could be productive.

Such practices have become an accepted part of the rehabilitation services delivery system. These programs do indirectly encourage clients to investigate their motivation and desire, as well as interests, regarding work. Often emphasis is placed on self-concepts (Stevens, 1962) and other internally felt states. The difficulty with these concepts is that they do not readily translate into work-related terms. The Theory of Work Adjustment has been developed specifically to relate descriptions of the work personality to comparable concepts of the work environment, thereby facilitating the process of relating occupations to a person's needs and abilities (Lofquist, Dawis and Hendel, 1972). Programs and materials helping clients define their own work personalities in terms of work environments can be incorporated within the typical service delivery system. The goal of such a program is to increase the placement potential of clients in terms of increased satisfaction and satisfactoriness on their eventual jobs from which tenure can be more readily predicted.

One such program utilizing the concepts of the Theory of Work
Adjustment has been developed for the treatment of psychiatric patients
(Mental Health and Manpower, 1968; Sterling, Miles and Miskimins, 1967).
Special note was mentioned regarding the difficulty experienced by
project staff in convincing the traditional treatment teams that need
systems of patients should be viewed from an employment perspective, in
order to enhance the eventual community adjustment of patients. A fifty
percent success rate was claimed for this program (Miskimins, Cole and
Oetting, 1968). Hopefully, such success will begin having an impact on
the field of rehabilitation, such that future resistance to a strong
emphasis on the personality characteristics of clients will be reduced.

Rehabilitation Outcomes

A widespread, much debated issue within the rehabilitation field at this time is concerned with what is the actual, desired outcome for individuals who receive rehabilitation services. According to the Rehabilitation Act of 1973 clients will have to maintain a job placement for a minimum of 60 days in order for successful case closure to occur. Thus, legislatively, the accepted outcome or criterion of success is employment. However, counselors in the field have long been dissatisfied with this all-or-nothing criterion.

A recent review of the problems associated with the present employment closure criterion has been summarized as follows:

"It tends to emphasize numbers rather than quality of service."

"It may tend to encourage closing a client's case before it is ready to close, in order to meet a quota."

"It may tend to encourage keeping a client on the caseload longer than should be, in order to assure meeting next year's quota."

"It tends to make it difficult to obtain an even flow of work throughout the year."

"It is a difficult procedure to apply in areas of specialized counselors."

"It does not allow credit to the counselor for the amount of work or efforts expended on cases closed non-rehabilitated."
(from Lenhart, Westerheide, Cowan, and Miller, 1972)

The present employment closure criterion, taken in the context of
The Minnesota Theory of Work Adjustment, is closely related to the satisfactoriness concept. The client's satisfaction can only be inferred
from the client's tenure on a job, but tenure is presently rarely

measured beyond the 60 day closure criterion.

Both of these criteria, satisfaction and satisfactoriness, depend on a client's success on a job. Recently, it has been noted that there is a growing concern among rehabilitation professionals to develop outcome criteria which more adequately reflect total client accomplishment (Walls and Tseng, undated). Attempts have been made to assess client gains in other areas of life. Reagles, Wright, and Butler (1971) have developed the Rehabilitation Gain Scale which incorporates not only the vocational concepts such as employment, employment status, and wages; but also such social-psychological concepts as leisure time activities. family adjustment, and socialization. Westerheide and Lenhart (1973) are in the process of developing The Service Outcome Measurement Form to measure rehabilitation gain in areas which they define as education, economical/vocational, physical functioning, adjustment to disability, and social competence. Both of these attempts at measuring this broader concept are concerned with this impact over time. It is essential to know the extent of the effect services have over time, but it is also true that many other variables can interfere with client gain and wash out any effects of rehabilitation services. The Chicago Jewish Vocational Services (Gellman, Stern and Soloff, 1963) has developed a Scale of Employability which can be completed by a counselor immediately following service delivery. This scale includes many of the same concepts which the previously mentioned instruments include.

It is apparent that the field of rehabilitation has developed more extensive outcome criteria than simply employment/no employment. Some of these outcomes have been closely linked with employment status such as wages, extent of public assistance, length of employment, and amount

of satisfaction with employment. Still other criteria have been suggested that seem primarily related to non-vocational areas of life such as family adjustment, socialization, use of leisure time, as well as emotional/psychological factors.

It is also apparent that the field of rehabilitation has the ability to measure aspects of client gain over a long period of time, as well as immediately following service delivery. What is unknown, at this time, is how all these criteria relate to each other, if at all, and what effect time has on these relationships. Furthermore, Bolton (1975) has postulated that outcome as measured by the client's perspective, may be independent of the measure of outcome obtained from the counselor. Since the various instruments and methods reviewed here depend either upon the judgement of the client or the counselor, it becomes necessary to know if the client and counselor agree in their perceptions of how much the client has changed as a result of rehabilitation services.

In summary, the field of rehabilitation is beginning to respond to the problem of measuring client outcome. Many different instruments scaled to measure various vocational and non-vocational concepts from either the client's point of view or the counselor's and at various points in time, are being utilized. It is unclear as to how these different instruments relate to one another. This state of affairs inhibits interpretation of research that use only one of these instruments to measure outcome. Current and future research in rehabilitation will become more meaningful when the relationships between the various measures become known.

Programmed Learning

The basic format of the Learning Unit researched by this study is a structured, programmed one. This format was considered the most appropriate one to use based upon certain considerations gleaned from the literature, as well as from field personnel.

To reiterate the ideas of Holland (1974) is appropriate here. He recommends that counseling devices be self-instructional. This was also a desire of field personnel. Counselors in general, but especially rehabilitation counselors due to particular constraints, are concerned with their time efficiency. Self-instructional materials have the potential of maximizing both the client's and counselor's time, if the appropriate learning occurs. Holland also recommends cost efficiency. There will be increased costs relating to the printed programmed materials, but it is reasonable to expect that a highly structured, programmed format has the potential of yielding information that maximizes the outcome of services in a minimum amount of time. Such a result would offset printing costs.

An additional imput from field personnel relates to the requirement found in the Rehabilitation Act of 1973. This Act requires clients to participate in the forming of their rehabilitation services plan. A structured, programmed device geared to the formation of vocational job goals is certainly in line with this legislation.

A final recommendation from field personnel was to develop the unit in a way that would make it useful for clients with mental retardation or educational deficits. Gardner (1971, pp. 255-261) indicates that instructional materials for retarded persons should have the following

characteristics, among others:

- 1. Concrete materials and related experiences involving doing should be used whenever possible...The [learning] program [should be] designed to insure the elicitation of the to-be-learned response. (p. 255)
- 2. Generalization or transfer is facilitated by a set of systematic transitional experiences. (p. 256)
- 3. Although repitition in itself does not insure learning and effective retention, repitition that results in reinforcement does strengthen behavior. (p. 256)
- 4. When new materials are presented, the [retarded] students should be prompted to apply verbal mediators to these materials. (p. 256)
- 5. Although the retarded do learn incidentally, best learning occurs in a systematic program. (pp. 256-257)
- 6. The [learning] program should be so designed that continuous success is attained. (p. 257)
- 7. An environment which minimizes failure and systematically reinforces self-adequacy and self-control will greatly enhance active learning. (p. 257)
- 8. Learning is facilitated by arranging the instructional environment so that the retardate responds to and interacts with the material presented. (p. 258)

It seems reasonable to expect that a structured, programmed format concluding with a client/counselor interaction, has the potential to meet Gardner's specifications and Holland's recommendations. Further support for a structured, programmed format can be found in Davis, Alexander and Yelon (1974).

This research project is basically concerned with the problem of developing specific job goals from poorly defined or undefined ones.

The following table is reproduced from Davis et al. (1974, p. 260). It

is a table comparing three teaching methods particularly developed for problem-solving.

Comparison of three methods as to their fidelity, cost, safety, and completeness.

Quality	Programmed	Simulated	On-the-Job
	Procedure	Procedure	Training
Fidelity	Moderate	Moderate to Good	Excellent Very expensive Possibly dangerous Incomplete
Cost	Inexpensive	Expensive	
Safety	Very safe	Safe	
Completeness	Quite Complete	Complete	

Although in certain qualities other methods are superior, the overall performance rating given to the programmed procedure format makes it a highly desirable one for this research.

Lastly, support for a programmed learning unit that uses reading as the sole modality for instruction is found in Travers (1967). Evidence is presented that indicates that print is often not enhanced by the addition of other learning modalities such as sound or additional sight cues. Often, confusion can result when more than one modality is used at the same time (p. 35). This might be an expecially important consideration for the mentally retarded.

CHAPTER III

METHODOLOGY

Selection of Research Participants

The subjects of this research project were rehabilitation clients of the Vocational Rehabilitation Services of the State of Michigan.

There were three separate selections necessary in order to generate the pool of subjects for this study. First, district offices were selected. Secondly, counselors were selected. Lastly, client subjects were selected.

Selection of District Offices

Three cities in the State of Michigan were selected as potentially adequate sites in which to conduct the research project. The predominant consideration in the selection was the need to have employment possibilities available for clients, since goal-directed job-seeking behaviors were the focus of this research. The cities chosen were Flint, Lansing, and Grand Rapids. It was felt that in spite of a recessionary economy, clients from these cities might still realize a chance for employment and therefore, be motivated to engage in vocational counseling and job-seeking. After gaining permission from the state agency director, the district supervisors from the agency offices of these cities were approached to negotiate the procedures of the research project.

Selection of Counselors

After agreements were obtained from the district supervisors, counselors in the agency offices of the selected research sites were exposed to the procedures and purposes of the research project. The counselors were asked to volunteer. The volunteers administered both treatment and control conditions. The sequence in which the conditions were offered was randomly varied for each counselor. All counselors were requested to complete a biographical questionnaire. Of those that responded, analyses were made between volunteer and non-volunteer counselors to determine if there were any differences existing that might produce a biasing effect on the outcomes of the research. The results of these analyses appear in Chapter IV.

Selection of Client Subjects

All counselors who volunteered were asked to select four clients from their caseloads with whom they would ordinarily conduct vocational counseling. No limits were placed on counselors regarding who they might select for the project. It was thought desirable not to restrict the counselors in their selection since a natural rehabilitation process flow was needed to adequately test the experimental variable in field settings. Thus, clients who were selected were in various stages of the rehabilitation process and could be expected to be quite heterogeneous in other characteristics as well. Upon the selection of four clients, counselors were requested to randomly select two of the clients to be placed in the experimental condition and two to be placed in the control condition. This was completed by drawing names.

Several counselors preferred to use the vocational counseling procedures at the intake of new clients precluding the use of these

randomization procedures. Thus, for those counselors assigned to administer the experimental procedures prior to the control procedures, their first two eligible intake clients were exposed to the experimental condition. For counselors assigned to administer the control condition first, their first two eligible clients became control subjects. Comparison of the experimental and control subjects on selected demographic characteristics are presented in Chapter IV as a check on the success of the randomization procedures in equating the two groups.

Procedures

Development of the Experimental Procedures

Since the focus of this study was the state/federal rehabilitation system, the initial contact made was with the state agency director. After the approval of the state director was gained, district supervisors in the selected cities were approached with the preliminary project plans. Not only was their permission sought to conduct the experiment within their districts, but also consultation was sought from them regarding the most desirable means of implementing the research. It was considered essential that the research procedures not interrupt the flow rate of case service delivery, and that there was potential for the district offices to benefit from the research project.

Once the ideas of the district supervisors were incorporated within the procedures and methodology of the research design, a pilot test was conducted over a three-week period at a rehabilitation facility which included approximately sixteen clients. All the materials, instruments, and procedures were implemented during the pilot test. These same pilot test subjects were used to test the follow-up procedures.

based on the experiences of the pilot test, district offices were again approached to implement the next stage of the project. This stage was modeled after the approach-persuasion technique reported in Fairweather, Sanders and Tornatzky (1974). One counselor from each of the district offices, or a counselor chosen as representative of the district offices within a city, was chosen to conduct a demonstration project which included a full-scale implementation of all the research procedures, excluding follow-up. This demonstration project served as the reference for other counselors to decide to participate or not. All counselors, whether they agreed to participate or not, were asked to complete the SCERC Counselor Questionnaire.

As soon as counselors volunteered to participate, they were asked to select four clients from their caseloads who, in their opinion, needed vocational counseling. Once four clients were chosen, two were randomly assigned to the experimental condition and received exposure to the Learning Unit, and two were randomly assigned to the control group and received the traditional counseling procedures used by their counselors.

Counselors were also randomly assigned to administer either the experimental or control conditions first. Training in using the Learning Unit was given only prior to the time when counselors would use it.

Thus, those counselors who administered the control condition first, did so unaware of what the particular procedures of the experimental condition were, although a basic knowledge of the intent of the Learning Unit had been explained to them. This procedure was implemented to serve as a check to see if the experimental and control conditions were

relatively independent in spite of using the same counselors to administer both conditions. If no difference is apparent between those control subjects who followed experimental subjects and those control subjects who preceded experimental subjects, then this would suggest that there was little confounding between experimental and control conditions.

Clients were asked to volunteer and upon written receipt of their permission, they began the experimental procedures. Experimental subjects completed the Learning Unit, including the Knowledge Check, and reviewed the results with their counselors. Control subjects, upon volunteering, completed the Knowledge Check. Immediately following the conclusion of counseling, counselors completed the Scale of Employability: Counseling.

Approximately three to five weeks following completion of the initial experimental conditions, the subjects were contacted by telephone to complete the Structured Interview. Interviewers were all familiar with rehabilitation. One was a rehabilitation counselor with a masters degree; one was a doctoral candidate in rehabilitation counseling; one was completing a masters program in rehabilitation counseling; one was a secretary in a rehabilitation counselor education program; and one was the experimenter. With the exception of the experimenter, the interviewers did not know whether the subjects were experimental or control. If certain subjects did not have telephones, personal contact was made with them by the experimenter. This was done on only three occasions, thus minimizing any chance that experimenter bias could affect the final outcomes.

At approximately the same time the Structured Interview was being

conducted, counselors were asked to complete the Service Outcome Measurement Form on each subject. Demographic data on the subjects was also collected at this time.

The procedures for this project were conducted primarily during April, May and June of 1975. Throughout this period, rehabilitation clients of the state agency system were also recruited to complete the Learning Unit and the Minnesota Importance Questionnaire. This was necessary to provide data to see if the Learning Unit did indeed reflect the concepts of the Theory of Work Adjustment.

Development of the Material in the Learning Unit

A ten-page instructional unit was developed based on the concepts and principles of The Minnesota Theory of Work Adjustment. Programmed learning principles were considered in the initial drafting of this material. These principles included use of personalized words such as "we" and "you", objectives stated for the learner, branching programs, examples, question frames, feedback, and definition of terms (Espich and Williams, 1967).

An additional eleven-page procedure was developed which provided the instructions for clients who used the unit to identify and/or expand job goals. The complete Learning Unit appears as Appendix A. Two procedures were developed for making job goals. The first of these enabled the client who already had a job goal to identify additional job goals that had the potential of satisfying the same needs as the client's initial job goal. This procedure assumed an intuitive, if not deliberate, attempt sometime in the development of the client's initial job goal that in some way considered the personal needs of the client. The second procedure for identifying job goals was based entirely on

the need system concepts of the Theory of Work Adjustment. The client was asked to check off statements relating to needs identified by the theory that applied to the client. The client was then encouraged to choose four of those needs previously checked that seemed the most personally relevant. These four expressed needs formed the basis for identifying jobs that could meet at least one of the four needs.

An attempt was made to establish the client's ability level within each procedure. The Minnesota Studies In Vocational Rehabilitation have published the occupational reinforcer patterns of 148 jobs (Borgen, Weiss, Tinsley, Dawis and Lofquist, 1972; Rosen, Hendel, Weiss, Dawis and Lofquist, 1972). These jobs are classified using the Dictionary of Occupational Titles (DOT) system. Alternate titles are supplied to increase the total number of job listings to approximately 370 titles. For each of these titles the General Educational Development (GED) required and the Specific Vocational Preparation (SVP) needed as found in the DOT were combined to form a skill code. For the client who had an initial job goal, an alphabetical listing of these jobs was supplied where a search could be made for the initial job goal. The client was then directed to record the skill code of the job goal if it or its alternate was listed. This listing also provided reference to additional tables included in the unit which were developed from each of the twenty needs identified by the Minnesota Theory. (The need for authority was omitted because it rarely appeared as a high need.) These tables provided other jobs that could potentially satisfy the same need system as the initial job goals. The client was encouraged to identify jobs which had the same skill code as the initial job goal.

The tables which listed jobs according to their potential for

meeting a specific need were constructed from data presented in Rosen et al. (1972) where jobs were ranked on the basis of their potential to satisfy each need identified by the theory. The jobs listed in the tables of the Learning Unit were selected because of their high ranking. Occasionally, moderately ranked jobs were added to the tables if few high ranked jobs occurred for a need.

For those clients who could not find their job goal or who did not have one, an alternative procedure was provided to help them indentify their skill code. An attempt was made to operationalize the six levels of GED and eight levels of SVP as used by the DOT. The clients could then check the GED and SVP most descriptive of themselves.

Once the clients completed the unit and identified job goals, a counselor-client interaction was recommended to discuss the relevancy of any of the job goals for the clients. This procedure was considered essential as a procedure for the Learning Unit for several reasons.

First, counselors, at least in rehabilitation agencies due to accountability requirements, feel compelled to maintain awareness of any direction taken by their clients. Secondly, it is unknown at this time just how prone the Learning Unit is to mistakes in client completion of it.

Lastly, recent criticisms have been made regarding the fact that in Holland's Self Directed Search, a counselor-client interaction is not specifically built into the procedures (Brown, 1975). This seems to be a particularly cogent criticism of such a procedure when conducted within rehabilitation agencies since vocational counseling is one of the services particularly needed by people declared eligible to receive rehabilitation services.

Pilot Test of the Learning Unit

The Learning Unit is intended for the population of clients of vocational rehabilitation services. Sub-groups of this population, particularly the mentally retarded, may have difficulty with any procedure requiring reading. It was necessary to assess how well people of various educational and learning abilities could use the unit. A Flesch Readability Level (Flesch, 1949) was determined and the unit reading material was rated as easy to fairly easy. However, it was felt that a better guage of the reading ability requirements would be to let people varying on measured intelligence rating and educational background actually try the unit. Six people were exposed to the unit. These people were classified by intelligence level and education as follows:

Person	Intelligence Level	Education	
1	bright normal	some college	
2	normal	high school	
3	dull normal	some college	
4	dull normal	high school	
5	borderline	high school (special	education)
6	borderline	sixth grade	_

All of them in the pilot test were able to read the material. A posttest of 10 items was administered to check on comprehension. The results were as follows:

Intelligence Level	Education	Score on Post-Test
		(10 items)
bright normal	some college	10
normal	high school	$7^{!}_{\hat{\mathbf{z}}}$
dull normal - 1	some college	9
dull normal - 2	high school	6 ¹ 2
borderline - 1	high school	8
	(special ed.)	
borderline - 2	sixth grade	42

Also, the people showing lower comprehension had difficulty following directions for job goal development. An attempt was therefore made to improve the content of the unit to make it more readable and to make the directions simpler. A second pilot test, due to time constraints was not undertaken. A comparison between the original and revised editions indicated that areas which caused confusion seemed adequately changed. Since all the people completed the unit in thirty minutes to an hour, the fear that users might be bored if the unit was too simple was discounted. From the results of this pilot test, it was decided to instruct counselors who were apprehensive regarding the reading ability of clients, to help such clients by actually reading the unit along with them and guiding their completion of it.

Instrumentation

Introductory Statement

A variety of instruments were used in this study to measure various aspects of client status at various points in time and from various perspectives. Each instrument will be separately reported and in the order in which it was used in the research. Instruments used for specific purposes other than recording client status are described last.

The instruments are presented in the appendices as indicated, including the scoring rules developed for each.

Knowledge Check (Appendix B)

A knowledge check was developed to test whether the Learning Unit was actually teaching users new concepts. A pool of items was constructed and these were given to seven subjects who had not been

exposed to the Learning Unit, but who were rehabilitation clients. Ten items were selected from the pool to be included in the knowledge check. Criterion for item inclusion was that half or more of the subjects responded incorrectly to a given item, thus indicating that knowledge required to answer the item was not generally known. Nine of the ten items met this criterion. The tenth item was answered incorrectly three of seven times but was included also.

The Revised Scale of Employability: Counseling (Appendix C)

The original Scale of Employability (Gellman, Stern and Soloff, 1963) consisted of three separate scales. These were the Workshop Scale, the Counseling Scale, and the Psychological Scale. The purpose behind the development of the Scale was to provide an instrument capable of predicting employment outcomes of people receiving rehabilitation services from rehabilitation facilities. Early research with the Scale indicated that reliability ranged between .50 and .55 (Pearson r) (Chicago Jewish Vocational Service, 1963). Also, predictive validity for the Counseling Scale using early job placement, long-tern job placement, and job maintenance resulted in coefficients of .06 to .36, although a majority of the coefficients are reported to be significant at the .01 level (Wright and Trotter, 1968).

In an attempt to increase the predictive potential of the Workshop and Counseling Scales for research purposes, Bolton sought to revise the two scales to improve upon the relatively low reliability of the Employability Scale (Bolton, 1970; 1972). A vignette-anchoring technique was used as reported by Taylor, Haefele, Thompson and O'Donoghue (1970). These authors present data based on the reliability

studies of various instruments used in clinical observations. They report that reliability becomes improved substantially after applying the new anchored format. In one case, reliability of a total scale increased from .43 to .76 with subscale reliabilities improving from a range of .10 - .63 to a range of .67 - .86. Bolton also documents an increase in reliability of the subscales of the Workshop Scale to .76 - .95 (Bolton, 1970). Although reliability data for the Counseling Scale used in this research is not reported, its scale stability is documented to be as good as the Workshop Scale (Bolton, 1972) and thus, there is every reason to expect that the subscale reliabilities of the Counseling Scale will be as adequate as that of the Workshop Scale. It can also be expected that the Scale will demonstrate improved predictive validity with the increased reliability performance.

The Scale as used in this research consisted of the six subscales of the Counseling Scale. These subscales are Adequacy of Work History, Appropriateness of Job Demands, Interpersonal Competance: Vocational, Interpersonal Competance: Social, as well as, Language Facility and Prominance of Handicap. Counselors were asked to complete the ratings immediately following their vocational counseling interview with the client. A manual and score sheet was provided for each counselor.

Upon the suggestion of the author of the Revised Scale of Employability: Counseling, the number of anchored vignettes of each subscale was decreased from ten to five. This was done to increase the discriminative power of the anchors since the Counseling Scale had not been previously used in a state agency setting.

^{*}Bolton, B. Personal communication, January 30, 1975.

The Service Outcome Measurement Form (Appendix D)

This instrument was developed to measure client change in economic, vocational, physical, educational and psychological areas of a client's life (Westerheide and Lenhart, 1973). Items were developed and organized into scales labeled Difficulty, Education, Economic/Vocational Status, Physical Functioning, Adjustment to Disability and Social Competency.

Reliability was determined by having fifteen counselors rate the same ten cases. The following inter-judge reliability coefficients by scale are reported:

Difficulty: .69

Education: not a rating scale
Economic/Vocational Status: .95

Physical Functioning: .75

Adjustment to Disability: .79

Social Competence: .72

Reliability for the total scale is reported as .93.

Validity for The Service Outcome Measurement Form was first established by factor analyzing the scale to see if the intended structure was in fact obtained. The analysis yielded five factors. The Difficulty Scale was excluded from the analysis. The five factors were labeled as Psychosocial, Economic/Vocational, Family Relationships, Physical Functioning, and Educational. These factors accounted for 52% of the total variance produced by the scale. It was felt that these factors corresponded closely with the scales intended in the development of the Form.

Further evidence of validity is presented as concurrent validity. Counselors completing the Form were also asked to complete case difficulty ratings, time and effort ratings, and severity of handicap ratings. Adjusted correlations to remove counselor differences yield

correlations for the total Form Score with the three counseling ratings as .39, .28 and .41. These are moderate but significant at the .01 level.

Finally, evidence for validity is also reported by the significant findings that show a relationship of the scales of the Form with demographic factors often shown to relate to rehabilitation outcomes. These were age, primary disability and marital status.

The Service Outcome Measurement Form consists of 23 items to be completed by the counselor. Time of administration is typically less than ten minutes. Standardized instructions are available for administration.

The Rehabilitation Gain Scale (see Appendix E)

This scale was developed by the Wisconsin Studies in Vocational Rehabilitation (Reagles, Wright and Butler, 1970). It was developed to provide an instrument that would be sensitive to the many aspects of a person's life that could be changed due to rehabilitation services. It is designed to provide one composite score which would reflect the overall extent of rehabilitation gain resulting from the changes in these aspects of life. Items were developed that related to physical, mental, cultural and emotional life factors.

Reliability for this scale was enhanced by maximizing the internal consistency of the items by the reciprocal averaging technique (RAVE) and then applying the Hoyt method. Hoyt reliability is reported as .70.

Validity was established first by a cross-validation method dividing the original sample into two groups and reperforming the RAVE analysis on the subgroups. The coefficient for the original group and the new subgroup is given as .964. Secondly, the authors of the Scale present

a case for construct validity as follows:

Subsequent research with the Rehabilitation Gain Scale indicates that it certainly possesses a satisfactory degree of construct validity. The Scale was designed to measure a single underlying variable which was relatively independent of certain variables and significantly - and meaningfully - associated with other variables. The analysis by the RAVE program of rehabilitated clients responses to the items of this Scale indicates that the items measured the postulated single underlying variable and the client's responses to the Scale's items were quite consistent. (Reagles, Wright and Butler, 1970; p. 29)

The authors then demonstrate that certain predictions based on the constructs of this Scale are in fact substantiated. Some of these are that culturally disadvantaged clients show more gain than medically disabled clients, younger clients gain more than older ones, clients with family support gain more than those without support, and those clients receiving greater funds for training gain more than clients receiving less for training.

The Rehabilitation Gain Scale consists of twenty items that are completed by the client. However, the format of the Gain Scale was changed for purposes of this experiment. Twelve of the twenty items were adopted for this research. Six were left intact and six were modified. It can be expected, therefore, that the reliability of the Gain Scale as used in this project will be somewhat reduced due to the shortened length and modification of items, and the method for obtaining client responses. This format also precludes the generation of a composite rehabilitation gain score as is generally done with the Gain Scale. Each item, rather, will be separately scored and evaluated.

The Structured Interview (Appendix E)

The Structured Interview was developed specifically for this research project. It consists of four scales, all but one of which were developed using a rational process rather than empirical. One of the scales consists of ten items taken directly or adapted from the Rehabilitation Gain Scale as is previously noted in this instrumentation section where the development and psychometric properties of the Gain Scale are reported.

Thirty-three items comprise the total Structured Interview. As mentioned, ten of these are devoted to measuring client rehabilitation gain as defined by the Rehabilitation Gain Scale.

Thirteen items are designed to measure aspects of client jobseeking behaviors. These items intend to develop data regarding job
contacts made by clients, persons from whom clients requested job information, knowledge about clients' selected job goals, and knowledge
regarding necessary training needed for their job goals.

Seven items comprise the third scale which is designed to measure knowledge carried over from clients' previous vocational counseling experiences with their rehabilitation counselors. Three of the seven items are derived directly from the concepts of the Theory of Work Adjustment and attempt to measure the lasting impact of those concepts on clients.

The fourth scale consists of three items which are intended to measure the clients' satisfaction with the vocational counseling which they received from their rehabilitation counselors. Although thirty—three items comprise the entire Structured Interview, clients will be exposed to either twenty-eight or twenty-four depending on whether they

have become employed in the time interval between treatment exposure and follow-up. Several of the items are duplications to insure comparable data across those employed or not employed.

The Structured Interview is designed to be administered individually to clients either by telephone or by personal interview. Instructions for the interviewer are inserted into the format of the Structured Interview. It is intended that the interview be completed in a minimal amount of time, preferable not to exceed fifteen minutes.

Other Instrumentation

The following discussion presents those instruments not used to measure the impact of experimental conditions on clients. They are, however, essential to the study in potentially clarifying any interpretation that might be made from results that occur due to the experimental conditions.

The Minnesota Importance Questionnaire (MIQ)* was developed by the Minnesota Studies in Vocational Rehabilitation (Gay, Weiss, Hendel, Dawis and Lofquist, 1971). This instrument is designed to measure a person's need system and relate the resultant profile to occupations and occupational clusters. These occupations may or may not have the potential of satisfying the person's inventoried needs. Reliability data indicates that the twenty subscales of the MIQ have internal consistency coefficients generally in the vicinity of .80. Stability coefficients of the twenty subscales range from a high of .89 for an immediate testretest interval to a low of .40 for a six-month interval (Gay et al., 1971). Also presented in Gay et al. (1971) is a description of the

^{*}The MIQ can be obtained from Vocational Psychology Research, University of Minnesota, Minneapolis, Minnesota.

validity data generated in research of the MIQ. Briefly, the MIQ can distinguish need systems in differing occupational groups. Also, need profiles of members of occupations correspond to reinforcer patterns of their occupations as predicted by the Theory of Work Adjustment (rho = .60, .62, .48, .58 for rehabilitation counselors, high school counselors, and retail trade workers I and II, respectively); and finally, the ability of the MIQ to predict job satisfaction given an acceptable degree of satisfactoriness has been documented to be quite adequate. (Hit rates are reported to be 68% and 73% for cashiers and salesclerks, respectively).

The MIQ consists of 210 pair-comparison items and can usually be completed by an individual in approximately thirty minutes.

Since the MIQ seems to adequately reflect the concepts of the Theory of Work Adjustment, it was chosen to give an indication of how well the Learning Unit developed by this project reflected these same concepts. Comparisons can be made of the need profiles of clients as reported by the MIQ and the profile of needs as expressed by the clients in the Learning Unit. The results of the comparison between the MIQ and the Learning Unit are presented in Chapter IV. If the comparison yields substantial percentage agreement between the two methods of measuring needs, evidence will be available documenting that the Learning Unit is indeed an application of the Theory of Work Adjustment.

The Studies in Continuing Education for Rehabilitation Counselors (SCERC) Counselor Questionnaire developed by the University of Iowa (Miller and Roberts, 1971) (Appendix F), was utilized in this project to provide biographical data of counselors who were volunteers or non-volunteers in this research project. Items included in this questionnaire

relate to general demographic characteristics, educational information, and employment information. Additional items were specifically developed for this project to gain an indication of the amount and direction of vocational counseling services provided by these counselors. Reliability and validity data are not available. A total of forty-one items comprise the questionnaire. The comparisons between volunteers and non-volunteers are presented in Chapter IV. Such comparisons can indicate whether any essential difference existing between volunteers and non-volunteers could contribute to any effects generated by the experimental conditions of this research project.

The final instrument used in the project, the Counselor Evaluation Form (Appendix G), was developed specifically to allow counselors to express their feelings regarding the utility of the Learning Unit as a counseling device in rehabilitation agencies.

Hypotheses

The following definitions are necessary for understanding the hypotheses:

- 1. The Experimental Group refers to those clients who were exposed to vocational counseling via the Learning Unit.
- 2. The Control Group refers to those clients who were exposed to vocational counseling procedures traditionally used by their counselors.

Prior to the investigation of the hypotheses it will be necessary to consider whether the randomization procedures were successful in equating the Experimental Group and the Control Group. These groups will be compared on selected demographic data. The hypotheses are as follows:

- 1. The Experimental Group will demonstrate greater knowledge of vocational counseling concepts considered essential by the Theory of Work Adjustment than the Control Group. Scores from the Knowledge Check will provide data to test this hypothesis.
- 2. The Experimental Group will demonstrate greater retention of vocational counseling concepts over approximately one month's duration than the Control Group. This will be tested by items in the Structured Interview developed to measure the retention of concepts of the Theory of Work Adjustment.
- 3. The Experimental Group will appear more employable to their counselors after vocational counseling than the Control Group.

 This comparison will be based on counselor ratings on the Revised Scale of Employability: Counseling.
- 4. The Experimental Group will appear to their counselors to have gained more from rehabilitation services than the Control Group. Results of the Service Outcome Measurement Form will be used to test this hypothesis.
- 5. The Experimental Group will indicate greater rehabilitation gain than the Control Group. This hypothesis will be tested by results on those items of the Rehabilitation Gain Scale incorporated in the Structured Interview.
- 6. The Experimental Group will indicate a greater level of jobseeking activities than the Control Group following exposure
 to treatment conditions. Data generated from the items on the
 Structured Interview designed to measure various job-seeking
 activities, including job attainment, will be used to test
 this hypothesis.

- 7. The Experimental Group will indicate more satisfaction concerning their vocational counseling experience with their counselors than the Control Group. Items of the Structured Interview designed to measure client satisfaction will be used to test this hypothesis.
- 8. The Experimental Group will proceed through the rehabilitation process more quickly than the Control Group following exposure to treatment conditions. This hypothesis will be tested on the basis of status change occurring for clients in the interval between treatment and follow-up.

Finally, several questions regarding possible confounding variables will be studied. These questions are as follows:

- 1. Are volunteer and non-volunteer counselors similar on the biographical items of the SCERC Counselor Questionnaire?
- 2. Are control subjects whose counselors were assigned to administer the experimental treatment prior to the control treatment similar on the dependent measure to control subjects whose counselors were assigned to first administer the control treatment? This question is concerned with the possible confounding effect of the experimental treatment on the control treatment when the control treatment follows the experimental.
- 3. Are Experimental Group clients and Control Group clients followed-up over a similar time span?

Questions 2 and 3 will be investigated if significant differences occur between experimental and control conditions.

Experimental Design and Statistical Analyses

The experimental design is basically a two by four factorial design with a third factor nested within the second factor. Each of these factors is considered fixed. The first factor refers to treatment condition and includes the experimental and control groups. The second factor, location, contains four levels indicating the different rehabilitation offices from which the research was conducted. The third factor refers to the individual counselors who participated in this research. In all, a total of fifteen counselors were included in the design. The overall design is, therefore, a 2 x 4 x 15 factorial design. Counselors and subjects were allocated to the design as shown in Figure 1.

,———		Experim	ental	Cont	trol			
	Counselor 1	х	x	x	x			
	Counselor 2	x	x	x	x			
Location 1	Counselor 3	х	x	х	х			
	Counselor 4	x	x	х	x			
	Counselor 5	х		х	х	n	=	19
	Counselor 6	х	x	x	x			
	Counselor 7	х	x	х	х			
Location 2	Counselor 8	x	x	х	х			
	Counselor 9	х	x	x		n	=	15
	Counselor 10	х	х	х	х			
Location 3	Counselor 11	х		х	x			
	Counselor 12	х	x	х	x	n	=	11
	Counselor 13	х	x	x	x			
Location 4	Counselor 14	х	x	x	x			
	Counselor 15	х	х		х	n	=	11
		n =	28	n =	28	N	=	56

Figure 1. Experimental design.

The design contains an equal amount of subjects in each treatment group, but not in each location. It is therefore an unbalanced design. Also, four subjects were intended to be included with each participating counselor, with two being assigned randomly to each condition. Four original subjects were not available for follow-up and excluded from the design. Thus, four counselors participated with only three subjects. Two subjects from each treatment condition were excluded as a result of their unavailability at follow-up.

Analysis of variance was chosen as the statistical analysis.

Analysis of variance lends itself well to the factorial design of the experiment. Since the design is unbalanced across locations care is necessary in the interpretation of significant location effects due to the possible lack of independence within the design. Also, the variances of the dependent variables were scrutinized to determine if equal variances exist across locations and treatments to warrant the use of analysis of variance, although the analysis should be robust across treatments since both conditions have equal sample sizes. The Finn Multivariance program was used to conduct the analyses of variance.

Only the univariate analyses were of interest, due to the relative lack of interpretability of the multivariate analyses when so many variables were scrutinized with a minimum understanding of how they might be conceptually related. Since this is a field research with a relatively small sample, an alpha level of .10 was chosen to indicate significant differences.

In order to indicate what relationships do exist among the demographic, process, and outcome variables a cluster analysis was also performed on the data. Only variables that approach a normal distribution were included. Separate correlation matrices were extracted as

well as the dimension structure. The BC Try Cluster Analysis Program was used. The CDC6500 computer at Michigan State University was used to compute these analyses.

CHAPTER IV

RESULTS

Introductory Statement

Several analyses are reported in this chapter. The first section reports results of comparisons between volunteer counselors who participated in the research and those who were non-volunteers, and between experimental and control clients. Only one significant difference of twenty-seven comparisons occurred between volunteer and nonvolunteer counselors, and no differences occurred between client groups. The second section reports data which substantiate that the Learning Unit as used by this research was an application of the Theory of Work Adjustment. The third section reports the analyses of variance which investigated the effects of the factors in the experimental design on the dependent measures. The treatment indicated only one significant difference between client groups across all the variables. In this instance, the Experimental Group performed better on the Knowledge Check immediately following treatment exposure. The Experimental Group was no better than the Control Group on any other comparison. location and counselor factors did not show any consistent differences among their levels. The fourth section reports the counselor evaluations of the Learning Unit. Their overall impression appeared quite favorable. The fifth section presents the results of the cluster

analysis of client demographic variables as well as counseling process and outcome variables. These results show little intercorrelation occurred among these variables. Of most importance were the findings that showed little relationship between client and counselor perceptions of client outcome, little relationship between the various outcome measures used and client job-seeking behaviors, and little relationship between gaining jobs and almost anything clients and counselors do. These findings suggest that to assess process and outcome variables in counseling multivariate measurements are required. Age and other client demographic variables showed moderate relationships to gaining employment. Means and standard deviations of the variables analyzed are presented in Appendix I.

Client and Counselor Characteristics

The results of comparisons between experimental and control clients and between participating and non-participating counselors are presented to indicate if there were any pre-existing differences between these groups that could contribute to whatever differences occur over the experimental process. No significant client differences occurred. Only one of twenty-seven comparisons among volunteer and non-volunteer counselors was significant.

Table 4.1 provides a selection of client variables that could influence the research outcome. Inspection of Table 4.1 reveals that the experimental and control groups were quite similar, at least on these measured variables. These results indicate that the randomization procedures were successful in equating the experimental and control groups.

Table 4.1^a

Comparison of Experimental and Control Clients on Demographic and Related Characteristics

Variable	Experimental \overline{X}	Control X	Test of Significance	p ^b
Age	30.07	26.04	F = 6.66	•02
Sex	1.71	1.46	F = 4.26	•05
Status at Treatment	3.78	4.00	F =c	•57
Previous agency contact	1.64	1.82	F = 4.76	·04
Number of dependents	1.43	.82	F = 3.99	.06
Age at disablement	17.20	14.70	$F = \dots$	•49
Primary disability - severe	1.61	1.57	$F = \dots$.87
Presence of secondary disabil:	ity 1.25	1.39	$F = \dots$	•47
Number of other disabilities	. 14	.11	$F = \dots$	•58
Years of academic schooling	11.68	11.04	$F = \dots$	•59
Months of vocational training	1.07	.68	F =	• 36
Months of on-the-job training	•21	•60	$\mathbf{F} = \dots$	•49
Months of adjustment training	• 39	•00	F = 4.60	•04
Counselor rating of case dif-	3.57	3.51	$F = \dots$	•49
ficulty (Scale 1 of Service				
Outcome Measurement Form) Counselor rating of prominance of handicap (Scale 6 of Revisional Country)		81.30	F =	•75

^aSee page 53 for explanation of interpreting the F statistic and p value.

Table 4.2 presents the comparison of participating and non-participating counselors. The variables under scrutiny were either taken from the SCERC Counselor Questionnaire or were related to vocational counseling activities. Table 4.2 indicates that only one of twenty-seven variables was significant beyond the .10 level. Such a result could be due to chance alone given the number of comparisons. However, the variable under question, counselor use of the Dictionary of Occupational Titles, may have been influential to the overall result of the research. The experimental Learning Unit may have encouraged counselors to use the DOT

^bA p value of .006 was needed for significance.

^CF = ... indicates that within-group variance greater than between-group variance.

to expand upon the data generated by the Learning Unit. Counselors, already predisposed to use the DOT, may have had more success with the Learning Unit than counselors who did not regularly use the DOT.

Table 4.2

Comparison of Volunteer and Non-Volunteer Counselors on Demographic and Employment-Related Characteristics

		Vol.ª			Non-Vol.		Test of
Variable	qu	×	SD	r	×	SD	Significance
Age	13	28.5	2.81	21	32.4	7.03	t = 1,625
Sex		/ L =	H	Ξ	= 15 F		2
Educational level	MA	ω 11	7 = A	MA.	= 13 BA	6	×2 = 0
College G.P.A.	17		97.	20	2.89	•	t = .514
Rehabilitation Counselor	17	3.46	2.53	23	3.56	'n	t =097
experience - years total							
counseling							
Experience - years	75	5.10	2.90	21	6.50	6.70	11
Job satisfaction	15	5.20	1.22	23	2°00	.72	t = .58
Rating of supervision	17	3.43	1.24	53	3.17	1.12	11
Caseload size	<u>1</u>	104.80	6.50	25	106,30	37.80	11
Personal books relating to	17	34.90	67.80	22	25.60	63.70	t = .54
occupation							
Number of journals	7	1.30	1.01	23	1.80	1.77	t = 1.09
Hours of inservice training -	14	4.20	4.9		6. 00	7.10	t = .90
month	1				,		
Attitude toward training	5	2.80	1.28	23	2.60	1.20	t = .47
Н	Effect o	of Training	ng on:				
Face-to-face client contacts	15	7.93	1.73	23	8.65	1.37	t = 1.38
Finding specific job for client	17	7.70	1.83	51	7. 50	1.76	ŧi
Using Psychological Reports	17	9.14	1.68	22	8.73	1.60	t = .72
Formulating plant for client	14	8.29	1.79	21	8.14	1.83	t = .23
Ising test results to mitde olient	1),	0 1	1,60	2	8, 90	1,19	+ - +
Dealing with unrealistic client	<u> </u>	8	2,36	22	8.14	2,36	0
job choice	ţ	•	•	<u> </u>			

Table 4.2 (cont'd.)

		Vol.			Non-Vol.		Test of
Variable	u	X	SD	ជ	×	SD	Significance
		,	;		١		2 10
Access to placement specialist	yes	# ~ [yes = 3 no = 11	y Ke	yes = 5 no = 20	no = 20	X X 10 1 4 10 10 10 10 10 10 10 10 10 10 10 10 10
sources of occupational information used	-	2.5	₩.	77	00.2	77•1	#0°-
Use of placement techniques	12	1.16	66.	21	8.		t = .30
Use of vocational tests	14	2.6h	1.29	25	2,36		t # .62
Use of Dictionary of Occupational	15	2.40	.95	24	1.6	1.6	t = 1.90d
IITTES % reselved referred to previously	17	ر ار	OC 60	00	21 10	23 10	+ 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2
used employers	<u> </u>	3	× • • •	1	5	•	<u>.</u>
% caseload self-placing	<u>ნ</u>	41.70	41.70 27.40	21	50.20	50.20 27.90	t =49
Use of employment resource agencies	13	2.61	1.33	22	3.18	. 8	t ==1.05

^aA total of fourty counselors responded; fifteen participated in the experiment, twenty-five did not; seven refused to respond.

b A variable number of counselors responded to each item.

 $^{\text{c}}_{\text{An alpha}}$ (α) level of .10 was chosen as the critical value.

dSignificant at $\alpha = .05$

Comparisons of Need Profiles as Generated by the Minnesota Importance Questionnaire and the Experimental Learning Unit

Since the Learning Unit was based on the Theory of Work Adjustment, some empirical verification was needed before it could be called an application of the Theory of Work Adjustment. Since subjects could respond correctly to questions derived from the Theory, there is some indication that the Learning Unit did teach concepts of the Theory. Additional evidence that the Learning Unit systematically applied the Theory of Work Adjustment was sought by comparing the need profiles as generated by an instrument already validated as measuring concepts of the Theory with those need profiles as generated by the Learning Unit. The instrument chosen for comparison purposes was the Minnesota Importance Questionnaire (MIQ). The Learning Unit was administered to twenty clients of the state/federal rehabilitation agency. The MIQ was administered to the same persons. The four highest needs from each profile were compared and the matches were as follows

Frequency
0
7
7
5
1

The probability of hitting 3 of 4 by chance for one person is approximately 1 in 785 and that for 2 of 4 is approximately 1 in 70. The overall hit rate was 50%. There does appear to be some systematic congruence between need profiles of the Learning Unit and the MIQ. This result lends further substantiation that the Learning Unit was an application of the Theory of Work Adjustment.

Results of the Analyses of Variance

This section is organized around each of the eight hypotheses previously presented. Each hypothesis is restated and the summary ANOVA tables for each variable of concern to that hypothesis is provided. The F statistics reported in each table reflect results of the analyses of variance for tests of hypotheses. The dependent variables used within the analyses were examined in multiple series. Therefore, the necessary magnitude of F indicating significance at alpha $(\alpha) = .10$ fluctuated for each test depending on the number of variables analyzed in each series. The probability values (p) that reach significance at alpha $(\alpha) = .10$ are noted within each ANOVA table. The required p value necessary to reach significance for each hypothesis test is footnoted with each table. The p values within each table reflect the values of analyses of variance made in series.

Hypothesis 1: The Experimental Group will demonstrate greater knowledge of vocational counseling concepts considered essential by the Theory of Work Adjustment than the Control Group.

The scores of the client Knowledge Check were used to test this hypothesis. The client Knowledge Check was administered immediately following treatment exposure. Table 4.3 presents the analysis of variance summary which supports hypothesis 1.

Table 4.3							
Comparison	on	the		Knowledge Control Cl		between	Experimental

Sources	df	MS	F	p ^a
Treatment Location C:L1 C:L2 C:L3 C:Lh TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L3	1 3 4 3 2 2 4 3 2 2 3 26	51.38 2.68 5.01 .67 12.30 1.01 4.95 1.36 3.82 3.61 7.05 1.69	30.36 1.58 2.96 .40 7.27 .60 2.92 .80 2.26 2.13 4.16	.001b .22 .04 .76 .003b .56 .04 .50 .13

 $^{^{\}mathbf{a}}_{\mathbf{A}}$ p value of .0143 was needed for significance.

Inspection of Table 4.3 indicates that the Experimental Group did know the vocational counseling concepts of the Theory of Work Adjustment to a greater extent than the Control Group. The Experimental Group mean score (\overline{X}) was 7.5 on a scale of 10 as compared to 5.5 for the Control Group. The significant effect within location 3 was caused by a very low score contributed by one experimental client.

Hypothesis 2: The Experimental Group will demonstrate greater retention of vocational counseling concepts over approximately one month's duration than the Control Group.

Items 19, 20 and 21 of the Structured Interview were designed to measure the knowledge of the clients on Theory of Work Adjustment concepts. The interview occurred on the average of seven weeks after exposure to treatment. Tables 4.4, 4.5 and 4.6 present the analysis of variance summaries for these items. The analysis does not support hypothesis 2.

Significant at overall alpha $(\alpha) = .10$.

Table 4.4

Comparison of Experimental and Control Clients' Use of Theory of Work Adjustment Concepts to Explain Needs

Sources	df	MS	F	p a
Treatment Location C:L1 C:L2 C:L3 C:Lh TxC:L1	1 3 4 3 2 2 2	1.17 .17 .07 .35 .20 .07	3.20 .47 .19 .95 .53 .18	.09 .71 .94 .43 .59 .84
TxC:L2 TxC:L3 TxC:L4 TxL R:TLC	3 2 2 3 26	.24 .83 .75 .15 .37	.65 2.27 2.06 .42	•59 •12 •15 •74

^aA p value of .0042 was needed for significance.

Table 4.5

Comparison of Experimental and Control Clients' Recall of Theory of Work Adjustment Concepts Seven Weeks

After Treatment

_			T.	n ^a
Sources	df	MS	F	Р
Treatment	1	.25	•58	•45 •55 •58
Location	3	.31	•73	• 25
C:L1	4	.31	•73	•50
C:L2	3	•17	.40	•75
C:L3	2	•06	. 15	.8 6
C:L4	2	•33	.78	•47
TxC:L1	4	•06	•13	•97
TxC:L2	3	•21	•49	. 69
TxC:L3	2	1.18	2.78	•08
TxC:L4	2	. 14	• 32	•73
TxL	3	.23	•55	•65
R:TLC	26	.42		·

A p value of .0042 was needed for significance.

Table 4.6

Comparison of Experimental and Control Clients' Awareness of the Importance of Their Needs Seven Weeks Following

Treatment

Sources	df	MS	F_	p ^a
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L3	1 3 4 3 2 2 4 3 2 2 3 26	2.08 .54 .01 .39 .16 .20 .27 .17 1.24 .06 .07	5.70 1.48 .03 1.07 .45 .54 .74 .46 3.40 .17	.03 .24 1.00 .38 .65 .59 .57 .71 .05 .84

A p value of .0042 was needed for significance.

Tables 4.4, 4.5 and 4.6 indicate that experimental clients did not maintain a working knowledge of the concepts of the Theory of Work Adjustment seven weeks after treatment to a greater extent than control clients. This was so even though the experimental clients did gain a measurably greater knowledge of Theory concepts immediately following treatment.

Hypothesis 3: The Experimental Group will appear more employable to their counselors after vocational counseling than the Control Group.

The Revised Scale of Employability: Counseling was the rating instrument used for this hypothesis. Counselors were asked to complete this scale immediately following treatment. Tables 4.7, 4.8, 4.9, 4.10 and 4.11 present the analysis of variance results. The results of these analyses do not support hypothesis 3.

Table 4.7

Comparison of Experimental and Control Clients on Adequacy of Work History Subscale of the Scale of Employability as Rated by Their Counselors

Sources	df	MS	F	p ^a
Treatment	1	384.60	.84	• 37
Location	3	55.36	.13	•95
C:L1	4	827.20	1.80	.16
C:L2	3	341.86	. 75	•54
C:L3	2	392.18	.86	• 44
C:L4	2	389.67	.85	.44
TxC:L1	4	218.77	•48	•75
TxC:L2	3	93.21	•20	.89
TxC:L3	2	1092.19	2.38	.11
TxC:L4	2	818.89	1.78	•19
TxL	3	844.21	1.84	.17
R:TLC	26	458.92	- · · -	- 1

aA p value of .0143 was needed for significance.

Table 4.8

Comparison of Experimental and Control Clients on Appropriateness of Job Demands Subscale of the Scale of Employability as
Rated by Their Counselors

Sources	df	MS	F	p.a.
Dources	41	113	I .	<u>P</u>
Treatment	1	786.35	1.35	•25
Location	3	1175.73	2.03	.14
C:L1	4	432.32	1.29	• 30
C:L2	3	42.31	.07	•97
C:L3	2	404.73	.70	•51
C:L4	2	211.89	• 37	•70
TxC:L1	4	330.92	•57	•69
TxC:L2	3	105.91	1.82	•90
TxC:L3	2	174.88	• 30	.74
TxC:L4	2	57.15	•10	•91
TxL	3	1478.23	2.55	•08
R:TLC	26	580.94		

A p value of .01h3 was needed for significance.

Table 4.9

Comparison of Experimental and Control Clients on Interpersonal Competence: Vocational Subscale of the Scale of Employability as Rated by Their Counselors

Sources	df	MS	F	pa
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L2 TxC:L3 TxC:L4 TxC:L3	1 3 4 3 2 2 4 3 2 2 3	418.94 1479.73 432.32 218.86 149.38 518.08 81.21 273.70 331.78 115.60 769.63 334.29	1.25 4.43 1.29 .66 .45 1.55 .24 .82 .99 .35 2.30	.27 .01b .30 .59 .65 .23 .91 .50 .38 .71

A p value of .0143 was needed for significance.

Table 4.10

Comparison of Experimental and Control Clients on Interpersonal Competence: Social Subscale of the Scale of Employability as Rated by Their Counselors

Sources	df	MS	F	р а р
Treatment	1	395.29	1.45	-211
Location	, 3	56.76	•21	.24 .89
C:L1	Ĭ,	272.57	1.00	.113
C:L2	3	129.38	.47	.70
C:L3	ź	191.60	•70	•51
C:L4	2	654.70	2.40	.11
TxC:L1	\bar{h}	25.66	•09	•98
TxC:L2	3	627.12	2.30	•10
TxC:L3	ž	155.20	•57	•57
TxC:L4	2	457.02	1.67	•21
TxL	3	730.62	2.68	•07
R:TLC	26	273.17		·

 $^{^{\}mathbf{a}}\mathbf{A}$ p value of .0143 was needed for significance.

^bSignificant at overall alpha (α) = .10.

Table 4.11

Comparison of Experimental and Control Clients on Language
Facility Subscale of the Scale of Employability
as Rated by Their Counselors

Sources	df	MS	F	p ^a
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2 3 2 3	46.96 389.25 58.04 304.77 127.41 144.74 101.91 215.77 151.63 147.43 418.66 108.48	.43 3.59 .59 2.81 1.18 1.33 .94 1.99 1.40 1.36 3.86	.52 .03 .71 .06 .33 .28 .46 .14 .27 .28

a A p value of .0143 was needed for significance.

The results of these counselor ratings revealed that the experimental condition did not appear to have an immediate effect in improving the clinical judgement made on the employability of experimental clients by counselors. This was so even for the rating of appropriateness of job demands which is a measure of the suitability of client job goals. Development of suitable job goals was a particular objective of the Learning Unit which was not fulfilled.

The significant location effect of Table 4.9 appears to be due to the counselors of two locations rating all clients considerably lower on this dimension than the counselors of the other locations.

Hypothesis 4: The Experimental Group will appear to their counselors to have gained more from rehabilitation services than the Control Group.

This hypothesis was analyzed on the basis of the ratings of clients by counselors on the Service Outcome Measurement Form. This rating took place approximately one month following treatment. Tables 4.12, 4.13, 4.14, 4.15 and 4.16 present the analysis of variance results of the SOMF subscales and total combined score results which do not support hypothesis 4.

Table 4.12

Comparison of Experimental and Control Clients on Economic/
Vocational Status Scale of Service Outcome

Measurement Form

Sources	df	MS	F	p ^a
Tre atment	1	.07	.15	.71
Location	3	1.29	2.56	.08
C:L1	ر ار	2.80	5.57	.002p
C:L2	3	2.87	5.70	.004b
C:L3	ź	•91	1.81	.18
C:L4	2	.85	1.69	•20
TxC:L1	<u>L</u>	.98	1.94	•13
TxC:L2	3	1.32	2.62	.07
TxC:L3	2	1.73	3.45	•05
TxC:L4	2	• 38	•75	.48
TxL	3	1.07	2.12	.12
R:TLC	26	•50		

A p value of .0166 was needed for significance.

Table 4.12 shows that experimental clients did not indicate a greater economic or vocational status gain over the controls. The significant counselor within location effect in location 1 was due to consistently higher ratings given across groups by one counselor while another counselor rated both groups lower. In location 2 one counselor rated control clients considerably higher than ratings of other clients in that location.

^bSignificant at overall alpha $(\alpha) = .10$.

Table 4.13

Comparison of Experimental and Control Clients on Physical Functioning Scale of Service Outcome Measurement Form

Sources	df	MS	F	p a
Treatment Location C:L1 C:L2 C:L3 C:Lh TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L3	1 3 4 3 2 2 4 3 2 2 3 26	.01 .03 .85 .08 .96 .02 .18 .05 .63 .37 .20	.07 .29 7.15 .66 8.01 .13 1.49 .45 5.18 3.07	.80 .84 .001 ^b .59 .002 ^b .88 .24 .72 .012 ^b .06

^aA p value of .0166 was needed for significance.

Table 4.13 shows there was no significant treatment effect. The presence of several significant counselor-within location effects are due in the first instance to one counselor who rated both groups lower than the other counselors, and in the second instance, one counselor who rated experimental clients higher than the controls. The significant interaction effect in location 3 was reflected by higher scores given to experimental clients by two counselors while the third rated controls higher.

^bSignificant at overall alpha (α) = .10.

Table 4.14

Comparison of Experimental and Control Clients on Adjustment to Disability Scale of Service Outcome Measurement Form

Sources	df	MS	F	p ^a
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L3	1 3 4 3 2 2 4 3 2 2 3 2 3	.11 .59 .58 .82 .87 .17 .31 .42 .01 1.03	.16 .86 .85 1.21 1.27 .25 .45 .62 .02 1.52 1.92	.69 .47 .51 .33 .30 .78 .77 .61 .98 .24

A p value of .0166 was needed for significance.

Table 4.15

Comparison of Experimental and Control Clients on Social Competency Scale of Service Outcome Measurement Form

Sources	d f	MS	F	pª
Treatment	1	•06	.16	•70 ,
Location	3	2.38	6.56	.002b
C:L1	Ĺ	•09	.24	•91
C:L2	3	1.36	3.75	.02
C:L3	Ź	.82	2.24	•13
C:L4	2	1.41	3.87	.03
TxC:L1	4	•30	.81	•53
TxC:L2	3	.12	• 32	.81
TxC:L3	2	•20	•56	•58
TxC:L4	2	•51	1.39	.27
TxL	3	.83	2.27	•10
R:TLC	26	• 36		

^aA p value of .0166 was needed for significance.

^bSignificant at overall alpha (α) = .10.

Table 4.15 indicates a location effect that was significant. This was due to counselors in location 2 rating all clients lower than counselors rating clients in other locations.

Table 4.16

Comparison of Experimental and Control Clients on Total
Service Outcome Measurement Form Score

Sources	df	MS	F	pª
Treatment	1	6.60	.11	•75
Location	3	131.35	2.11	.12
C:L1	4	153.74	2.47	.07
C:L2	3	21.06	• 34	.80
C:L3	2	264.64	4.25	•03
C:Lh	2	57.16	•92	.41
TxC:L1	4	63.85	1.03	•41
TxC:L2	3	73.19	1.18	• 34
TxC:L3	2	90.77	1.46	.25
TxC:Lli	2	144.09	2.31	.12
TxL	3	197.10	3.17	.04
R:TLC	26	62.27	- · ·	-

^aA p value of .0166 was needed for significance.

No effects existed when the scale scores were combined to yield a total score of the rehabilitation gain of clients as rated by their counselors. This highlights the overall findings relating to hypothesis 4. The experimental Learning Unit did not contribute to client gain as perceived by counselors.

Hypothesis 5: The Experimental Group will indicate greater gain than the Control Group on selected items of the Rehabilitation Gain Scale.

Selected items of the Rehabilitation Gain Scale were incorporated into the Structured Interview (items 25 to 33) which was administered usually by telephone, approximately seven weeks following treatment.

Tables 4.17 through 4.25 present the summary ANOVA for these items.

These data do not support hypothesis 5.

Table 4.17

Comparison of Experimental and Control Clients' Rating of General Physical Health

Sources	df	MS	F	p a
Treatment	1	4.49	5.55	•03
Location	3	-44	•54	.66
C:L1	4	• 37	.46	.76
C:L2	3	.17	.21	.89
C:L3	2	.58	•27	.50
C:LL	2	•56	•69	•52
TxC:L1	4	1.13	1.39	.26
TxC:L2	3	•73	•91	.45
TxC:L3	2	.18	.22	.81
TxC:L4	2	1.69	2.09	.14
TxL	3	2.50	3.10	.04
R:TLC	26	.81		

 $^{^{\}mathbf{a}}_{\mathbf{A}}$ p value of .0042 was needed for significance.

Table 4.18

Comparison of Experimental and Control Clients' Rating of General Mental Health

Sources	df	MS	F	p a
Treatment	1	.25	•20	.66
Location	3	.05	·04	•99
C:L1	Ĺ	1.10	.88	.49
C:L2	3	3.39	2.71	•07
C:L3	2	. 38	• 30	.74
C:L4	2	2.28	1.82	. 18
TxC:L1	14	1.68	1.34	.28
TxC:L2	3	•51	·41	•75
TxC:L3	2	•26	.21	.81
TxC:L4	2	2.56	2.05	•15
TxL	3	1.10	.88	.47
R:TLC	26	1.25		

A p value of .0042 was needed for significance.

Table 4.19

Comparison of Experimental and Control Clients' Rating of Likelihood of Gaining Job Goal

Sources	df	MS	F	p a
Treatment	1	9.40	6.43	•02
Location	3	2.97	2.03	.13
C:L1	Ĺ	1.07	•73	.58
C:L2	3	2.08	1.42	.26
C:L3	Ź	.76	•52	.60
C:L4	2	7.68	5.25	•01
TxC:L1	4	1.46	1.00	.43
TxC:L2	3	2.39	1.64	.21
TxC:L3	2	•66	.46	.64
TxC:L4	2	•91	.63	•54
TxL	3	.43	•29	.83
R:TLC	26	1.46		

A p value of .0042 was needed for significance.

Table 4.20

Comparison of Experimental and Control Clients' Estimate of Employment Status in One Year

Sources	df	MS	F	pª
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2	1 3 4 3 2 2 4	.52 2.51 2.05 2.23 1.64 1.38 2.18	.29 1.37 1.12 1.27 .90 .75 1.19	.60 .27 .37 .31 .42 .48 .34
TxC:L3 TxC:L4 TxL R:TLC	2 2 3 26	.38 1.07 1.96 1.83	.21 .59 1.07	.82 .57 .38

A p value of .0042 was needed for significance.

Table 4.21

Comparison of Experimental and Control Clients' Amount of
Leisure Time Spent Alone

Sources	df	MS	F	p a p
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L4	1 3 4 3 2 2 4 3 2 2 3	120.02 907.56 884.29 27.89 127.71 135.59 486.67 525.08 105.95 245.56	.33 2.46 2.40 .08 .35 .37 1.32 1.42 .29 .67	.57 .09 .08 .97 .71 .70 .29 .26 .75
TxC:L2 TxC:L3 TxC:L4	3 2 2	525.08 105.95 245.56	1.42 .29 .67	.26 .75 .52

^aA p value of .0042 was needed for significance.

Table 4.22

Comparison of Experimental and Control Clients' Amount of
Time Spent with Family

Sources	df	MS	F	pª
Treatment	1	9.40	•02	.89
Location	3	1074.14	2.23	.11
C:L1	Ĺ	134.87	.28	.89
C:L2	3	2451.39	5.08	.01
C:L3	2	112.09	•23	•79
C:LL	2	1073.98	2.23	.13
TxC:L1	4	141.84	•29	.88
TxC:L2	3	2596.53	5 . 38	.01
TxC:L3	2	525.64	1.09	• 35
TxC:L4	2	438.29	•91	.42
TxL	3	1884.10	3.90	.02
R:TLC	26	482.58		

A p value of .001,2 was needed for significance.

Table 4.23

Comparison of the Number of Groups, Clubs, and Organizations
Experimental and Control Clients Belong To

Sources	df	MS	F'	a. p
Treatment	1	1.27	1.94	.18
Location	3	•53	.b2	•50
C:L1	ĺı	1.28	1.95	.13
C:L2	3	•27	.41	.74
C:L3	2	1.37	2.09	.14
C:L4	2	1.03	1.58	•23
TxC:L1	4	1.07	1.64	.19
TxC:L2	3	1.84	2.81	.06
TxC:L3	2	• 38	•59	. 56
TxC:L4	2	•01	•02	•98
TxL	3	•46	•71	•56
R:TLC	2 6	.65	- •	

aA p value of .0042 was needed for significance.

Table 4.24

Comparison of Experimental and Control Clients' Level of Financial Independence Following Treatment

Sources	df	MS	F	p a
Treatment Location C:L1 C:L2 C:L3	1 3 և 3 2	3.59 13.33 2.05 4.31 3.73	2.22 8.25 1.27 2.67 2.31	.14 .001b .31 .07
C:Lh TxC:L1 TxC:L2 TxC:L3 TxC:Lh TxL R:TLC	2 4 3 2 2 3 26	7.45 .92 2.25 1.00 1.49 .83 1.62	4.61 .57 1.39 .62 .92 .52	.02 .69 .27 .55 .41 .68

^aA p value of .0042 was needed for significance.

Significant at overall alpha $(\alpha) = .10$.

The significant location effect in Table 4.24 was due to the poorer standing in terms of financial independence of clients in location 4 than clients in other locations. This occurred across both treatment groups.

Table 4.25

Comparison of Experimental and Control Clients' Increase in Income since becoming Rehabilitation Client

Sources	df	MS	F	pª
Treatment	1	6hh.25	.48	.49
Location	3	1198.45	•90	.46
C:L1	Ĺ	156.83	.12	.98
C:L2	3	829.98	.62	.61
C:L3	2	399.80	• 30	.74
C:L4	2	570.45	.43	.66
TxC:L1	4	1357.07	1.02	.42
TxC:L2	3	186.91	. 14	.94
TxC:L3	2	2792.96	2.09	.14
TxC:L4	2	1544.93	1.16	•33
TxL	3	222.56	•17	•92
R:TLC	26	1332.89	• • •	~ ~

^aA p value of .0042 was needed for significance.

Overall, these results indicate that clients perceived no gain in a variety of their life's circumstances and activities as a result of their exposure to the experimental treatment. This does not imply that gain or no gain was made since they had become rehabilitation clients. These findings only reveal that the addition of the experimental treatment did not improve the gain traditionally achieved by rehabilitation clients. Hypothesis 5 was not supported.

Hypothesis 6: The Experimental Group will indicate a greater level of job-seeking activities than the Control Group.

Data for this hypothesis was generated from several items contained in the Structured Interview (items 1, 4, 5, 9 to 13, 15 to 18, and 24). Clients had, on the average, seven weeks to implement jobseeking behaviors. Tables 4.26 to 4.35 present the analysis of variance results which do not support hypothesis 6.

Table 4.26

Comparison of Experimental and Control Clients' Successful
Job Attainment Following Treatment

Sources	df	MS	F	р а
Treatment	1	.07	•95	• 34
Location	3	•15	1.95	.15
C:L1	4	•05	•70	.60
C:L2	3	•01	•06	•98
C:L3	2	•01	•08	•93
C:L4	2	.01	.15	.86
TxC:L1	4	• 20	2.62	.06
TxC:L2	3	•00	.02	1.00
TxC:L3	2	•00	•02	•98
TxC:L4	2	•00	.04	•96
TxL	3	•0l ₁	.47	.71
R:TLC	26	•0δ		

aA p value of .0012 was needed for significance.

Again, note must be taken that only two clients across the total sample actually attained full-time employment status.

Table 4.27

Comparison of the Number of Employers Contacted by Experimental and Control Clients Following Treatment

Sources	df	MS	F	pª
Treatment Location C:L1 C:L2 C:L3 C:Lh TxC:L1 TxC:L2 TxC:L2 TxC:L3 TxC:LL4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2 3 26	6.84 .07 4.42 3.48 2.81 14.19 3.43 6.08 .49 20.34 6.47 3.56	1.91 .02 1.24 .97 .78 3.97 .96 1.70 .14 5.69 1.81	.18 1.00 .32 .43 .47 .03 .45 .19 .87 .01

A p value of .0042 was needed for significance.

Table 4.28

Comparison of the Number of Other Persons Contacted by Experimental and Control Clients Regarding Employment Following Treatment

Sources	df	MS	F	p ^a
Treatment Location C:L1 C:L2 C:L3 C:Lh TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L4	1 3 4 3 2 2 4 3 2 2 3 26	.98 .48 2.47 1.72 .65 .55 2.92 .72 2.16 .47 1.69 2.79	.35 .17 .89 .62 .23 .20 1.05 .26 .78 .17	.56 .91 .49 .61 .80 .88 .40 .85 .47

A p value of .00h2 was needed for significance.

Table 4.29

Comparison of Experimental and Control Clients' Knowledge of Initial Income Rate of Their Job Goals

Sources	df	MS	F	p ^a
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L3 TxC:L4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2 3 2 3	.25 .43 .26 .24 .07 .64 .23 .06 .27 .35 .28	.80 1.38 .83 .76 .23 2.08 .75 .20 .87 1.14 .91	.38 .27 .52 .53 .80 .15 .57 .90 .29 .34

^aA p value of .0042 was needed for significance.

Table 4.30

Comparison of Experimental and Control Clients' Knowledge Following Treatment of Where Job Goals can be Obtained

Sources	df	MS	F	p ^a
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2 3 26	.03 .05 .28 .06 .40 .15 .08 .42 .37 .09	.11 .15 .98 .21 1.38 .53 .27 1.44 1.29 .30	.74 .93 .43 .89 .27 .59 .90 .25 .29 .74

A p value of .0042 was needed for significance.

Table 4.31

Comparison of Experimental and Control Clients' Knowledge Following Treatment of Type of Vocational Training Needed for Job Goals

Sources	df	MS	F	a. p
Treatment	1	•00	•01	•93
Location	3	•35	1.38	•27
C:L1),	• 31	1.25	•32
C:L2	3	.06	.22	.88
C:L3	ź	.22	.88	.43
C:L4	2	.26	1.02	•37
TxC:L1	4	•06	.24	•92
TxC:L2	3	.14	•56	.65
TxC:L3	2	•07	.27	•77
TxC:L4	2	• 00	•01	1.00
TxL	3	•10	• 38	•77
R:TLC	26	•25		

aA p value of .0042 was needed for significance.

Table 4.32

Comparison of Experimental and Control Clients' Knowledge Following Treatment of Where Training for Job Goal can be Obtained

Sources	df	MS	F	pa
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L2 TxC:L3 TxC:L4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2 3 2	.02 .55 .23 .06 .20 .00 .18 .13 .24 .17	•73 2 •20 •90 •23 •80 •00 •73 •50 •94 •96	•79 •11 •48 •87 •46 1 •00 •58 •69 •40 •57

a A p value of .0042 was needed for significance.

Table 4.33

Comparison of Experimental and Control Clients' Knowledge of Duration of Training for Job Goal

Sources	df	MS	F	pª
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2 3 2 2 3	.07 .13 .40 .14 .32 .06 .06 .33 .07 .73 .41	.35 .64 1.90 .68 1.52 .27 .30 1.56 .35 3.46 1.96	.56 .60 .14 .58 .24 .77 .88 .22 .71 .05

A p value of .0042 was needed for significance.

Table 4.34

Comparison of Experimental and Control Clients' Rating of Activity Following Vocational Counseling

Sources	df	MS	F	p a
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2	.00 1.17 .53 1.40 .13 1.06 1.57 .48 .08 .06 1.15	.00 1.97 .89 2.34 .21 1.78 2.63 .80 .13 .11	.95 .14 .48 .10 .81 .19 .06 .51 .88 .90

A p value of .0042 was needed for significance.

Table 4.35

Comparison of Experimental and Control Clients' Recall
Seven Weeks Following Treatment of Job Goal
Made with Counselor

Sources	df	MS	F	pa
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxL R:TLC	1 3 4 3 2 2 4 3 2 2 3 2 2 3 6	.52 .79 .77 .19 .52 .71 .68 .50 .11 .06	.97 1.48 1.43 .36 .96 1.32 1.25 .93 .21 .11 1.50	. 34 . 25 . 25 . 78 . 40 . 28 . 31 . 44 . 81 . 89 . 24

^aA p value of .0042 was needed for significance.

Inspection of Tables 4.26 to 4.35 indicates experimental clients did not participate in more job-seeking activities. Nor did they increase their knowledge of their chosen job goal beyond that of the control clients. Finally, they were no more able to recall their job goal made in counseling than control clients.

Hypothesis 7: The Experimental Group will indicate more satisfaction concerning their vocational counseling experience with their counselors than the Control Group.

Items for this hypothesis were included in the Structured Interview (items 22 and 23). Tables 4.36 and 4.37 present the analysis of variance associated with these items. Hypothesis 7 was not supported by these results.

Table 4.36

Comparison of Experimental and Control Clients' Level of Satisfaction with Vocational Counseling Seven Weeks Following Treatment

Sources	df	MS	F	p ^a .
Treatment	1	.07	.16	•69
Location	3	.88	1.91	.15
C:L1	Ĺ	•67	1.46	.24
C:L2	3	2.72	5.89	.003b
C:L3	2	•49	1.06	• 36
C:L4	2	•25	•53	.60
TxC:L1	4	.86	1.87	.15
TxC:L2	3	.28	•60	.62
TxC:L3	2	•02	•03	•97
TxC:L4	2	• 56	1.22	.31
TxL	3	2.22	4.81	•01
R:TLC	26	.46		

^aA p value of .0042 was needed for significance.

The significant counselor effect within location 2 was due to one counselor at that location being rated low by both groups of clients in terms of vocational counseling received and a second counselor receiving considerably lower ratings from experimental clients.

^bSignificant at overall alpha (α) level of .10.

Table 4.37

Comparison of Experimental and Control Clients' Level of Satisfaction with Their Vocational Goal Seven Weeks Following Treatment

Sources	df	MS	F	p ^a
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L2 TxC:L3 TxC:L4	1 3 4 3 2 2 4 3 2 2	.81 .73 1.09 2.17 1.14 .66 .67 1.74 .23 .57	.96 .87 1.29 2.56 1.35 .78 .80 2.06 .27 .67	.34 .147 .30 .08 .28 .147 .54 .13 .77 .52
R:TLC	26	.85	•	

^aA p value of .0042 is needed for significance.

Table h.37 reveals that the experimental condition did not increase satisfaction with vocational counseling beyond the satisfaction acknowledged by control clients with traditional procedures.

Hypothesis 8: The Experimental Group will proceed through the rehabilitation process more quickly than the Control Group following exposure to treatment conditions.

Rehabilitation status changes were recorded for clients of both groups. Table 4.38 presents the analysis of variance of the amount of status change. Hypothesis 8 was not supported by the data.

		Table	4.38	3		
Comparison	of	Experimental				Status
		Changes Follo	owing	g Treatmo	ent	

Sources	df	MS	F	pª
Treatment Location C:L1 C:L2 C:L3 C:L4 TxC:L1 TxC:L2 TxC:L3 TxC:L4 TxC:L4 TxC:L4	1 3 4 3 2 2 4 3 2 2 3 2 2	.13 2.59 .76 1.51 8.46 .64 .20 .85 4.06 1.80 6.65	.15 2.93 .86 1.70 9.57 .72 .23 .96 4.59 2.04 7.52	.71 .05 .50 .19 .001b .50 .92 .43 .02

^aA p value of .0062 was needed for significance.

The significant effect within location 3 of Table 4.38 was due to the more rapid movement through the rehabilitation process of experimental clients of one counselor. The treatment by location interaction that is significant was due to the relatively rapid rate experimental clients moved through the process in location 3, while control clients in location 2 moved through relatively quicker than experimental clients. The rapid rate of location 3 experimental clients was attributed mainly to the one counselor causing the location effect previously noted. In spite of the fact that one counselor's clients moved through the process more quickly in association with the experimental treatment, no overall effect was apparent.

Counselor Evaluation of the Learning Unit

The counselors who participated in the research were requested to evaluate the Learning Unit as a counseling tool. Thirteen of the

^bSignificant at overall alpha (α) level of .10.

fifteen participating counselors returned usable ratings. The results are tabulated in Table 4.39.

Table 4.39

Tabulation of Counselor Ratings of the Learning Unit

			Ratings	
Ite	em	Definitely	Somewhat	Not at All
1.	Client understanding of need for vocational counseling improved	2	10	1
2.	Client integrated Learning Unit to rehabilitation program	2	10	1
3.	Counselor enjoyed Unit more so than other vocational counseling tools	6	Į.	3
4.	Counselor used results of Unit more so than other vocational counseling tools	5	6	2
5.	The Learning Unit can speed up the rehabilitatio process	n 1	11	1
6.	The Learning Unit was integrated into regular procedures without difficulty	7	3	3
7.	The Learning Unit would be recommended to other counselors	8	Ų	1

Also, ten of the thirteen counselors would continue to use the Learning Unit if it were available. Several of the counselors provided recommendations. Some of these were as follows:

^{1. ...} I would use it in shortened form. I think the client could learn from it and they did seen to enjoy it.

- 2. Constant exposure to the Unit would make it easier to use. The Unit does have value as long as the client is fairly intelligent.
- 3. I would suggest using this Unit in the initial phase of the rehabilitation process as a screening device and reality counseling tool check to determine preliminary feasibility of client job goals.
- 4. Great tool! It gives clients instant feedback which Kuder and Strong vocational tests do not.
- 5. If graphs and charts were used the Unit might be used by some of the clients with lesser abstract abilities.

The overall impression from ratings and comments was that the Unit was positively received. Some counselors questioned whether the Unit was too difficult for some clients, suggesting clients should be screened before being exposed to it. Counselors seemed to prefer using the Unit early in the rehabilitation process. However, those counselors most dissatisfied with the Unit used the Unit as part of intake procedure. This might have made it burdensome for clients and counselors alike since so much else was typically done at that time.

Results of the Cluster Analysis

Cluster analysis was performed on forty-seven variables on which data were collected during this research. Two general client outcome measures were completed by the counselors. These were the Scale of Employability: Counseling, completed by the counselor immediately following treatment indicating potential client outcome, and the Service Outcome Measurement Form, completed by the counselor at least one month after treatment. The Structured Interview, which solicited outcome information from clients, was collected approximately seven weeks after treatment. Data from the Structured Interview were concerned with client job-seeking behaviors such as job attainment, client knowledge

of Theory of Work Adjustment concepts, and client satisfaction with vocational counseling received from their counselors. It was anticipated that the cluster analysis would yield information regarding the relationships among outcome measures, as well as whatever relationships existed between job-seeking behaviors and the other variables. Job-seeking behaviors were the outcome criteria used to measure the effectiveness of the counseling innovation researched by this project. It was anticipated that the cluster analysis would indicate what, among the variables measured, was most closely associated with job-seeking. The resulting correlation matrices of interest are presented in this section, as well as the dimension structure of the cluster analysis. Both treatment samples were combined, yielding a total N of 56 for these correlational analyses.

The first matrix presents the correlations of the job-seeking activities with variables of interest. These correlations are presented in Table 4.40. The job-seeking variables identified by number within Table 4.40 and subsequent tables are as follows:

No. 35: Obtaining a job

No. 36: Number of employers contacted

No. 37: Other persons contacted

No. 38: Knowledge of initial income of job goal

No. 39: Knowledge of where job goal can be found

No. 40: Knowledge of training needed for job goal

No. 41: Knowledge of where training can be obtained

No. 42: Knowledge of length of training

No. 49: Client activity as a result of vocational counseling

The variables of interest are identified as follows:

No. 2: Age

No. 3: Sex

No. 11: Years of schooling

No. 27: Exposure to the Learning Unit

No. 29: Adequacy of previous work history (counselor rating)

	Table 4	. 40			
Correlation Matrix of	Job-Seeking General In		with	Variables	of

Variables of	TOD COMENT DOMATOLD								
General Interest	35	36	37	38	39	70	41	42	49
2	 23*	02	14	19	•09	.14	.16	•10	.16
3	05	•31 [*]	•23 [*]	•32*	18	.18	.03	09	 15
11	•20	.04	.22*	•33*	.15	•01	.04	•01	 23*
27	.14	.08	11	17	14	.12	.08	•00	.02
29	04	.10	.28 *	•02	.16	•25 [*]	.17	.14	.09

^{*} $r > .22 \text{ at } \alpha = .10; N = 56$

Inspection of Table 4.40 indicates little consistent correlation among these variables. The significant relationships could almost be accounted for by chance. There was a slight trend suggesting that as age increased job-seeking decreased. There was also a slight trend suggesting males participated in more job-seeking activity than females. Exposure to the Learning Unit showed no relationship to job-seeking behaviors, while years of schooling and an adequate job history showed slight positive trend. Caution must be taken regarding the variable of obtaining a job since only two clients of the total fifty-six actually achieved full-time employment status. Both were from the Experimental Group.

Also of interest are how well the various outcome measures anticipated and related to these essential job-seeking behaviors. It would seem that a successful rehabilitation outcome would depend to a great extent on these behaviors. If these outcome measures are valid, relationships of at least moderate strength should have occurred.

Table 4.41 presents the correlation matrix of the job-seeking behaviors with those variables measured by the Revised Scale of Employability:

Counseling (RSEC). The job-seeking variables are numbered as given on page 80. The variables of the RSEC are as follows:

No. 30: Appropriateness of job demands

No. 31: Interpersonal competency - vocational

No. 32: Interpersonal competency - social

No. 33: Language facility

No. 34: Prominance of handicap

Table 4.41

Correlation Matrix of Job-Seeking Behaviors with the Subscales of the Revised Scale of Employability: Counseling

	Job-Seeking Behaviors								
Subscales	35	36	37	38	39	40	41	42	49
30	.14	.01	•19	.19	06	.17	•22*	.14	•00
31	.16	•06	.25*	.12	.10	•02	.01	.04	.18
32	.14	.14	•23*	•16	.13	.05	.16	•16	.12
33	.11	10	•17	.19	 03	.01	02	06	03
34	.04	•22 [*]	07	•05	 13	.18	• 34 [*]	•25*	.25*

^{*}r > .22 at alpha (α) = .10; N = 56

This correlation matrix indicates only very little relationship between the subscales of the RSEC and job-seeking behaviors. There was a slight positive trend, but not one that had utility. Of slight interest is the stronger correlations of the Prominance of Handicap Scale. It seems a less prominant handicap was associated with increased job-seeking behaviors.

Table 4.42 is the matrix containing the correlations of the scales of the Service Outcome Measurement Form (SOMF) with the job-seeking behaviors. The job-seeking behaviors are numbered as given on page 80.

The scales of the SOMF are identified as follows:

No. 83: Economic/vocational status

No. 84: Physical functioning

No. 85: Adjustment to disability

No. 86: Social competency No. 87: Total SOMF score

Table 4.42 Correlation Matrix of Job-Seeking Behaviors with the Scales of the Service Outcome Measurement Form

		Job-Seeking Behaviors								
SOMF Scales	35	36	37	38	39	40	41	42	49	
83	•20	.15	.11	•13	09	02	02	08	12	
84	•04	.28*	10	11	•08	.14	. 14	01	.01	
85	•02	•05	.08	•03	.u6	•06	•33*	•06	•05	
86	•09	.15	•23*	.14	.07	09	•00	•01	•16	
87	.15	•22 [*]	.10	•09	•01	•05	. 14	02	.01	

 $[\]tilde{r} > .22$ at alpha (α) = .10; N = 56

Table 4.42 reveals that for the SOMF as for the Scale of Employability no consistent, moderate correlations were obtained.

The final outcome measures used in this research were selected items from the Rehabilitation Gain Scale. These items differed from the other outcome measures in that they were responded to by the clients directly and were not assessed by the counselor. Table 4.43 presents the matrix of correlations between the same job-seeking behaviors defined as given on page 80 and the Rehabilitation Gain Scale (RGS) items, which are defined as follows:

No. 50: Client rating of physical health

No. 51: Client rating of emotional health

No. 52: Client anticipation of attaining job goal No. 53: Client projection of future employment status

No. 54: Amount of leisure time spent alone by client

No. 55: Amount of time spent with family

No. 56: Organization, club, and group membership

No. 57: Level of client financial independence

No. 58: Increase in client income

Table 4.43

Correlation Matrix of Job-Seeking Behaviors with Selected Items of the Rehabilitation Gain Scale

	Job-Seeking Behaviors							
Gain Scale	35 36 37	38 39 40 41 42 49						
50	.01 .28* .05	.02 .33*10 .110920						
51	01 .1004	.12 .06 .02 .09 .02 .02						
52	. 13 08 . 18	.08 .21 .26* .25* .2103						
53	09 .24*12	.18 .020628*24* .06						
54	.15 .03 .08	.1510 .01 .09 .17 .21						
55	13 02 09	.04 .07 .003 .10 .1403						
56	.031005	.02 .1305182110						
57	.21 .11 .01	.180414 .01 .0118						
58	.08 .35*12	.29* .1638*121801						

^{*}r > .22 at alpha (α) = .10; N = 56

The Rehabilitation Gain Scale items also showed little consistent relationship with job-seeking behaviors. Several correlations approaced moderate strength in relation to number of employers contacted. However, there were several relationships of Gain Scale items with job goal knowledge variables which were in the negative direction.

An overall implication of the apparent lack of consistent relationships between outcome measures and job-seeking behaviors is that these measures may not have truly assessed rehabilitation outcome or that jobseeking behaviors did not necessarily indicate that a satisfactory outcome had occurred or would be likely to occur. Possibly, no relationships exist at all.

The interrelationships of the various outcome measures are also of interest. Table 4.44 presents the intercorrelation matrix of the three outcome measures used. The identifying notation is identical to that used previously.

Table 4.44

Intercorrelation Matrix of All Outcome Measures

 $r \ge .22$ at alpha (α) = .10; N = 56

Inspection of Table 1.14 indicates that the SOMF and the Employability Scales were internally consistent, especially so for the SOMF.

This was not true for the Gain Scale items. There was little internal consistency, but that was considered a desirable feature of the Gain Scale's construction. There was also moderate relationship between the SOMF and the Revised Scale of Employability, possibly reflecting that both were completed by the counselor. There was virtually no relationship between the Gain Scale items and the SOMF or the Employability Scale. Ratings done by clients and their counselors showed little correspondence.

Also of interest is the association between counseling process variables and job-seeking behaviors. Table 4.45 presents this matrix. Job-seeking behaviors are given on page 80. The counseling process variables are defined as follows:

- No. 1: Rehabilitation status at time of vocational counseling
- No. 30: Appropriateness of job goal (counselor rating)
- No. 43: Job goal agreement with counselor
- No. 47: Client satisfaction with vocational counseling
- No. 48: Client satisfaction with vocational goal
- No. 82: Counselor rating of client case difficulty

		Table 4.45			
Correlation	Matrix of	Counseling	Process	Variables	and
	Job-S	Seeking Beha	aviors		

Process	Job-Seeking Behaviors								
Variables	35	36	37	38	39	40	41	42	49
1	.22*	.06	 01	.01	08	•06	.05	.16	08
30	.14	.01	•19	•19	06	.17	•22*	.14	•00
43	•00	.11	.14	.12	.12	• 30 [*]	.10	.10	.10
47	.12	.04	.12	.02	02	.13	•26 [*]	. 25*	•54*
48	. 16	.08	.13	•10	•57 _*	•29 [*]	•26 [*]	•23*	.48 [*]
82	. 13	.21	.11	•07	.19	•09	•20	.13	•09

^{*} $r \ge .22$ at alpha (α) = .10; N = 56

Table 4.45 indicates that satisfaction with vocational counseling and the vocational goal on the part of the client tended to correspond to an increase in knowledge of occupational information and subsequent client activity. This was a reasonable expectation since a satisfactory relationship with a counselor should have facilitated information flow between client and counselor. Counselor rating of case difficulty did not seem to be associated with eventual job-seeking behavior.

Of final interest is the relationship between variables associated with the Theory of Work Adjustment and job-seeking behaviors. Table 4.46 presents this correlation matrix. Job-seeking behaviors are identified as given on page 80. Theory of Work Adjustment variables are as follows:

No. 28: Score on knowledge check of Theory concepts

No. Щ: Client concept of need as per Theory of Work Adjustment

No. 45: Knowledge of Work Adjustment concepts over time

No. 46: Client ability to specify needs as per Theory of Work Adjustment

Table 4.46

Correlation Matrix of Theory of Work Adjustment Variables and Job-Seeking Behaviors

Work Adjustment		Job-Seeking Behaviors							
Concepts	35	36	37	38	39	40	41	42	49
28	.18	•06	06	.05	.17	07	•03	07	•00
<u> </u>	•19	•33 [*]	•31*	15	08	•06	04	•07	•00
45	07	.23*	•09	•03	17	06	•04	01	•00
46	08	.02	17	04	•03	 06	 23 [*]	 11	06

^{*} $r \ge .22$ at alpha (α) = .10; N = 56

Table 4.46 shows little association between a client's working knowledge of Theory of Work Adjustment concepts and subsequent jobseeking behaviors.

The cluster analysis defined six dimensions which accounted for .94 of the variance among the variables. The clusters with their variables and variable loadings are as follows:

Dimensions	Variable Loadings
Cluster 1: The Experimental Condition	
 Exposure to Learning Unit Score on knowledge check 	•99 •48
Cluster 2: Counselor Rating of Client Poter and Client Outcome	ntial
 Client gain as rated by counselor Interpersonal competence - vocational Client adjustment to disability 	•82
4. Interpersonal competence - social 5. Appropriateness of job demands 6. Client case difficulty 7. Economic/vocational status of client	.70 .69 .68 .66
8. Social competency9. Language facility	.66 .55 .50
10. Weekly earnings of client11. Adequacy of work history12. Physical functioning	•47 •47

13.	Prominance of handicap	•45
Clust	er 3: Client Knowledge and Use of Occupational Information	
	Knowledge of training needed Knowledge of length of training Knowledge of where training can be obtained Lack of income increase since becoming client Other persons contacted about employment Client estimate of future employment status Client estimate of eventually gaining job goal	.82 .72 .70 .39 .33 .33
Clust	er 4: Client Satisfaction with Counseling	
1.	Client satisfaction with vocational counseling	•77
	Client action response to counseling Client satisfaction with job goal	.71 .70
Clust	er 5: Client Knowledge of Theory of Work Adjustment Concepts	
2.		.64 .39 .33
Clust	er 6: Client Demographic Characterictics and Obtaining Employment	
1. 2. 3. 4. 5.	Obtaining a job Fewer occurrences of secondary disability	.63 .52 .51 .41
6. 7. 8.		• 37 • 34 • 32

To conclude the reporting of results, Table 4.47 presents the intercorrelation matrix between the six dimensions.

Table 4.47					
Intercorrelation Matrix of Defined by Cluster					

			Clust	er			
Cluster	1	2	3	4	5	6	
1	-	07	•00	08	•26 [*]	•02	
2		-	.04	•23 [*]	 03	•10	
3			-	•33*	 18	21	
4				-	 21	11	
5					-	08	
6						-	

^{*}r > .23 at alpha (α) = .10; N = 56

Table 4.47 reveals that the clusters were relatively independent. Cluster 3 and Cluster 4 show the strongest, but still very moderate association, indicating again that client satisfaction in counseling seemed to accompany greater client knowledge and use of occupational information. This table highlights that counseling is a varied activity that yields a variety of results. This suggests that any evaluation of counseling process and outcome requires multivariate measurement.

Summary of Results

- 1. There was no difference between experimental and control clients on all fifteen demographic variables analyzed. There was only one significant difference between participating and non-participating counselors on a total of twenty-seven analyzed.
- 2. The Learning Unit appeared to systematically reflect the concepts of the Theory of Work Adjustment and could be described

- as an application of the Theory.
- 3. The Learning Unit did not yield any significant client gains as reported by counselor and client on any criterion variable other than on a knowledge check of Work Adjustment Theory concepts immediately after treatment. This effect was not maintained over time.
- 4. In general, counselors rated the Learning Unit positively and would continue to use it.
- come measures themselves, nor with the criterion of jobsceking. Satisfaction with counseling, counselor rating of client potential, as well as client knowledge and use of occupational information, were basically unrelated to outcome. Certain demographic variables, notably age, indicated a relationship to job attainment.

CHAPTER V

DISCUSSION

Introductory Statement

This research was primarily interested in two basic questions.

In general, these questions could be restated as:

- 1. Can an application of the Theory of Work Adjudtment to vocational counseling affect the job-seeking activity of clients, and, thus, the eventual outcome of rehabilitation services?
- 2. How do the various outcome measures relate to one another; how well do they reflect outcome; how well do counselors and clients agree regarding outcome?

The research findings and implications that relate to these general questions will be discussed separately.

Results and Implications Regarding the Application of the Theory of Work Adjustment

The Learning Unit, developed as an application of the Theory of Work Adjustment, did seem to teach the basic concepts of the Theory. Clients were able to respond accurately to a knowledge check containing questions derived from the Theory after being exposed to the Learning Unit. Control clients were not able to respond accurately. The Learning Unit also reflected quite systematically, the need profile as

generated by the Minnesota Importance Questionnaire, an instrument validated according to the Theory of Work Adjustment. It could be reasoned then, that the Learning Unit was indeed an application of the Theory of Work Adjustment.

In spite of the Learning Unit's congruence with the Theory, it did not have any consequent effect on a series of measures relating to rehabilitation outcome. It was hypothesized that job goals, as derived from the Unit, would have a motivational influence on the job-seeking behaviors of clients. Experimental and control clients, however, reported no differences. Clients also reported no differences over a series of items that had been related to rehabilitation outcome. Counselors also saw no differences between clients in potential outcome, as well as actual outcome.

Several factors may have influenced these results. First, clients did not maintain their knowledge of the Theory concepts. Within seven weeks there were no differences on knowledge of Theory concepts between experimental and control clients. The Learning Unit procedures were not powerful enough to maintain knowledge or promote motivated job-seeking behaviors. Several clients reported that they were not able to discuss the results of the Unit with their counselors as fully as they would have liked. Although a follow-up with the counselor was part of the Learning Unit procedure, this might not always have occurred satisfactorily.

A second factor possibly influencing the results was the poor employment situation occurring during the period of the research.

Unemployment figures were 15% or higher in each of the experimental locations. Relatively few clients were successful finding jobs, which

could have reduced their overall motivation to seek jobs. Many clients expressed interest in schooling and training rather than direct placement. Counselors too, were mainly organizing plans to develop training opportunities for their clients which could explain the relatively slow rate of status changes occurring across clients of both treatment conditions.

A third factor behind the relatively low rate of job-seeking on the part of the clients could be that they did not have adequate skills to do so. Over the course of seven weeks they averaged less than two employer contacts. Only about half of the clients had developed sufficient knowledge about their job goals to begin looking for the job. This implies that systematic attempts should be made to assess client job-seeking ability and to develop remedial training for those who don't know how to find a job.

A fourth factor that could have contributed to these results may have been that the measurements used were inappropriate. One counselor suggested that the Unit could best be used as a screening device to improve the cost/effectiveness ratio of service delivery. It was reasoned that the Unit could indicate unrealistic client aspirations sooner than other approaches; this was not measured. Also, the concepts of the Theory of Work Adjustment are best measured in an actual employment situation. Few clients obtained employment, thus limiting the usefulness of such measures at the point in time the research was conducted.

Other factors could also be attributed to the measurements themselves. The second knowledge check items and the items measuring client satisfaction with vocational counseling, both embedded in the Structured Interview, may have been too insensitive to differences between the treatment groups, Also, two of the outcome measures used, the Service Outcome Measurement Form, and the items from the Gain Scale, contain items that directly explore gains in client employment status. Since so few clients achieved employment, these measures could not be expected to show differences. However, lack of client employment should not have affected measurable differences on other aspects of gain, since these outcome scales supposedly measure such gains as increased physical and social functioning that are thought to be independent of client employment status.

It must be emphasized that in no way do these findings imply that the Theory of Work Adjustment has no utility for rehabilitation. In the first instance, clients did not maintain their knowledge of the Theory. Therefore, it is unclear as to whether the Learning Unit was too weak to maintain the knowledge it taught or the Theory concepts were not sufficient to generate client job-seeking behavior. Secondly, the positive counselor attitudes towards the Theory as explicated by the Unit, indicated that the Theory and the Unit made sense to their counseling activities. Follow-up findings of this research implied that clients' knowledge of occupational information was associated with satisfactory vocational counseling experiences with their counselors. Counselors, therefore, may want to use an instrument such as the Unit, as it increased their own enjoyment and satisfaction with vocational counseling. In addition, as already mentioned, a better test of the Theory would more appropriately be made after employment had occurred and been maintained for at least two months. It is possible, however, that the Theory of Work Adjustment could be better applied during

periods of general economic expansion. The Theory postulates that people have a wide variety of needs that can be fulfilled by various occupations. During the recessionary economy in which this research was conducted, people might have had a singular economic need that transcended other concerns. This was at least true for the rehabilitation clients who were subjects of this research. They were overwhelmingly concerned with their financial security.

In summary, the addition of the Learning Unit to the counseling process added little to measured outcome. Nor did it seem to improve client job-seeking behaviors beyond traditional procedures. The Unit did make a favorable impression on most counselors who used it. More extensive counselor follow-up using the results of the Unit as a base, may have encouraged greater levels of client outcome. Also, as part of follow-up procedures to the Unit, a job-seeking skills assessment and training program may have facilitated better client job-seeking behaviors.

The Relationship Among the Various Outcome Measures

Using job-seeking behaviors as the criterion for outcome of this research, three instruments validated as outcome measures of rehabilitation service delivery were cluster analyzed with these job-seeking behaviors and other variables. This assumed that job-seeking behaviors are related to eventual successful rehabilitation outcome, which, by law, must include a gain in employment potential. The three outcome measures used were the Revised Scale of Employability: Counseling (RSEC), Service Outcome Measurement Form (SOMF), and items from the Rehabilitation Gain Scale (RGS).

The cluster analysis indicated that there was little meaningful association among any of these measures and job-seeking behaviors. The cluster analysis also indicated that job-seeking behaviors, including knowledge of occupational information, also seemed to be unrelated to actually finding employment. The depressed employment situation during the time of the research could have contributed to this situation.

However, the implication of this research is that finding employment for rehabilitation clients is more conditional on demographic factors such as age, age at initial employment, years of schooling, and a favorable economic status. Again, too few clients actually gained employment to shed much light on job-seeking or other counseling activities as related to obtaining a job.

The cluster analysis also revealed little correlation between outcome as viewed by the counselor and outcome from the client's perspective. The SOMF and the RSEC, both completed by the counselors, were related but showed no relationship to the RGS items which were solicited from the client. This implied that research relying on just one of these two sources for outcome measurement could yield results that tell only half the story. It seemed that both sources should be considered when outcome research is being conducted.

Also of interest from the cluster analysis was that certain counseling process variables, including counselor/client agreement on the client's vocational goal and the client's satisfaction with vocational counseling, had little relationship with client job-seeking activity. It is apparent that favorable counselor projections of client rehabilitation potential had little relationship with anything including client outcome, client satisfaction with counseling, or client job-seeking

behaviors. Incorporating counseling concepts such as the Theory of Work Adjustment, did not seem to strengthen the effect of rehabilitation services on client outcome regardless of how it was measured. The perception by a client of a satisfying counseling relationship was associated with an increased knowledge and use of occupational information, but again, neither were related to job-seeking.

Finally, the cluster analysis showed that how counselors rated clients on potential outcome immediately after treatment was related to outcome measures done later. This result may have been more a function of the slow progress clients generally made through the rehabilitation process, especially in employment status gains. It still remains unclear as to how the passage of time affects how counselors perceive client outcome. It must be kept in mind, however, that counselor ratings of outcome did not relate to client assessment of outcome. Nor do counselor ratings relate to client behaviors such as job-seeking activity, which intuitively should relate to positive client outcome. Possibly, all the measures used actually assessed different concepts of gain, as they professed to do, and that these concepts were quite independent of each other. If this were true, the question that remains to be answered is in regards to why the various outcome and process measures did not relate to client employment gains. If rehabilitation services were primarily aimed at improving the employment status of clients, why were no relationships among the process and outcome variables obtained with client employment gains? If it is true that, as many in the field profess, it is important to help clients gain in all aspects of their lives, does this overall emphasis on gain lessen the particular emphasis on gain in client employment status? Gaining

employment and subsequent financial security was an overwhelming need of the clients in this study, yet they showed little actual gain and they anticipated little gain over the next year. The results of this study suggested that client employment status gains may not have been the overall emphasis of services for those clients under scrutiny. This can only be tentatively inferred and should be the object of further study that addresses this concern directly.

Since relatively few relationships were found in this research, one might also be led to conclude that various counseling activities are independent of each other and thus yield independent outcomes. This would indicate that any systematic evaluation of counseling process and outcome variables be completed using multivariate measurement procedures. Measuring only one type of expected outcome will most likely yield only partial information, at best, regarding what counseling has produced.

In summary, there did not seem to be one simple method existing in the field of rehabilitation to measure the concept of overall client benefit from rehabilitation services. Research undertaken to measure this concept and those variables that might contribute to it, should develop specific measurements that attempt to separately measure those behaviors and events that are the desired outcomes of the rehabilitation process. Composite ratings seemed too insensitive to measure the various types of outcome that accrued to clients. Separate measures should be developed to assess the perception of both deliverer and consumer of services, as they may vary.

The implication of this research for counseling proactice is less clear. It seems that even when client and counselor agree that a

satisfying relationships exists between them, and a client gains in adequate store of occupational information, positive outcome, as measured by job-seeking behaviors, including job placement, is not a consistent result. If counseling process and outcome variables are as unrelated as this research suggests, then counselors might want to carefully assess client needs and plan intervention strategies specifically geared to meet the assessed needs. Global approaches to counseling practice can not be expected to produce gains for clients. This also suggests that there is no assurance that clients will gain in other aspects of life if they gain in one aspect. Conceivably, clients could gain in one area and regress in others. Specifically, for vocational counseling in rehabilitation, this research suggests that clients will not necessarily obtain jobs unless they have achieved competence in job-seeking behaviors. Otherwise, accidents of life such as birth, age at disablement, and schooling opportunity may continue to have the strongest relationship to a client's employment outcome.

Another alternative for explaining the lack of relationships, is that counseling is an ineffective strategy for delivering vocational rehabilitation services, which result in job placement.

Limitations of the Research

The most obvious limitation of the research was its implementation during a rather severe recessionary economy. The emphasis placed on training by clients and counselors indicated an active avoidance of job-seeking behaviors for immediate employment placement. Many clients anticipated being in training for up to at least a year in the future. Clients seemed hesitant to consider immediate employment as a viable

option for them. Although this factor is a serious one, it is unavoidable. More powerful procedures need to be developed to overcome clients' feelings that jobs are inaccessible to them.

The need for more powerful treatment procedures suggested another limitation of this research. In retrospect, the Learning Unit was much too brief a treatment to insure long-lasting results. Although counselors were instructed to review the results with the clients, certain clients indicated at follow-up that they desired more extensive discussions with their counselors. Counselors may not have felt that they could spend as much time with clients to review results as the Learning Unit procedures recommended. It is possible that the current format of the Unit is too restrictive to be adequately integrated in the rehabilitation process.

Another possible limitation is that the Unit was researched over a heterogeneous sample of clients in terms of their readiness for employment. A more suitable sample of clients might be those who are just completing training or who are just ready to consider a type of training to enter. Using the Unit at intake may not yield results which the Unit was constructed for, although one counselor felt the Unit would be most effective as a screening device used at intake.

Also, the measurements used for this research may not have been sensitive or specific to the extent necessary to measure the knowledge and behaviors the Unit attempted to teach. The cluster analysis suggested that the standardized outcome measures used may not pick up specific gains clients indicate by changes in their behaviors. Also, if as the one counselor suggested, the Unit is a suitable screening device, no measures were made of this variable to test whether this is

in fact so.

Lastly, since the total sample of 56 is relatively small for such research projects, the findings presented here must be interpreted with due caution. Further study with increased samples could clarify the exploratory findings of this research.

Implications for Future Research

If the current format of the Learning Unit is not powerful enough for clients to maintain what they learn from it or to increase their job-seeking behaviors, but counselors feel that it is a viable counseling tool, a new format may be indicated. The Unit might be broken down into shorter, more compact sub-units that can be administered over time. Also, counselor intervention might be more appropriately structured to insure that clients gain the added reinforcement and knowledge from the counselor. The results of the Unit might be made more adaptable to inclusion in the individualized written rehabilitation program required for all clients. Training manuals could be provided for counselors to facilitate the inclusion of the results into their clients' rehabilitation plans. A very powerful change in format might be to include the Unit in a comprehensive job-seeking skills training package that would teach clients how to specifically implement behaviors to achieve the job goals which they derived from the Unit.

A different experimental design for future research studies seems warranted. The inclusion of an additional factor in the design that accounts for different levels of client job-readiness would provide a better answer to the question of whether the Unit has a differential impact on clients in different stages of the rehabilitation process.

Long-term follow-up studies of clients exposed to experimental procedures associated with the Unit should be conducted until the clients have established some indication of maintaining employment in one job. The concepts of the Theory of Work Adjustment are most operational in an employment situation. A better test of the Learning Unit might occur at the point in time when a client achieves a sustained period of employment. Such research could add knowledge on the validity of the Learning Unit as well as the Theory of Work Adjustment.

More specific measurements might also be used for future research than those used for this project. Such measures might include cost/ benefit analyses across treatment conditions, more specific knowledge check questions in the follow-up, more specific counselor ratings of client job-seeking behaviors, and more specific measures regarding client satisfaction with counseling, as well as a longer term follow-up.

Other research possibilities for the Learning Unit would be to use it with different client populations other than rehabilitation clients. High school students not expecting to continue advanced education might receive counseling help from the Unit. Also, since the Unit appeared to have no negative effects as opposed to traditional vocational counseling procedures, it might be informative to compare the Learning Unit systematically with other vocational counseling tools, particularly interest tests. Most research done with vocational tests is concerned with the various psychometric properties of the tests, particularly predictive validity. Little research is done investigating the utility of these tests for immediate benefit to the client in the counseling process. The Learning Unit and other vocational instruments might be compared on criteria similar to those used in this study.

Variables such as increased counselor and client satisfaction, increased client/counselor job goal agreement, increased client knowledge and activity resulting from counseling, and increased counseling efficiency in terms of costs and time are some of the relevant dimensions across which comparisons could be made. Inferences could then be made about the usefulness of vocational tests for various client populations.

Research should be directed toward analyzing the intent and emphasis of rehabilitation services in regard to what clients hope to gain. A clear perspective should be developed of the emphasis placed on client employment status gains in relation to actual service delivery. The emphases placed on type of services should reflect what clients hope to gain from rehabilitation services.

A final note is needed to point out the need to continue to include a location factor within research designs that investigate counseling across locations. Throughout this study, specific location effects occurred, although not in any consistent pattern. This indicates that different locations can create differential effects that should not be ignored by simply combining data across locations.

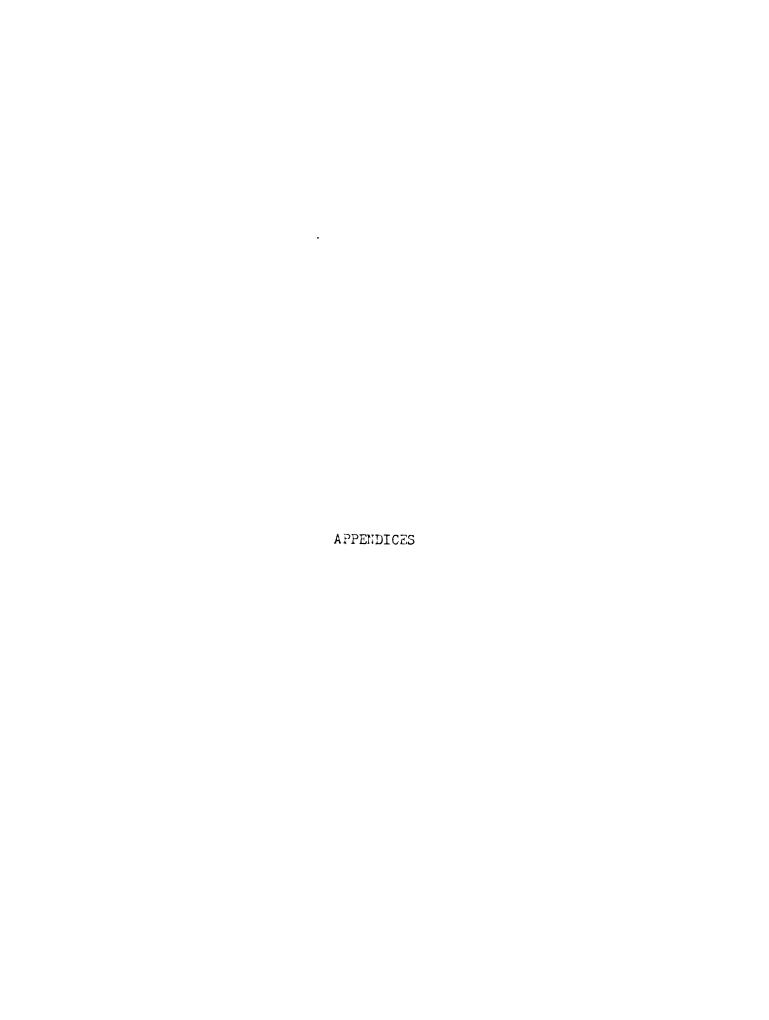
Conclusions

The Learning Unit researched by this project was shown to be an application of the Theory of Work Adjustment. The effects of the Learning Unit were, however, very brief. Clients exposed to the Unit did not engage in more motivated job-seeking behaviors or know more Theory-related concepts over time than clients not exposed to the Unit.

Counselors also could not distinguish differences between treatment groups immediately after exposure to treatment or over a one-month

follow-up. Modifications of the Learning Unit, suggested by the research results, could strengthen the power of the Unit to influence the behavior of clients in rehabilitation.

Cluster analysis of the outcome measures, as well as client demographic variables and several counseling process variables, indicated little relationship among counselor rating of client outcome, client perception of outcome, client satisfaction with counseling, client knowledge and use of occupational information, and subsequent employment gains. Only certain demographic variables, age in particular, indicated a relationship to improved employment status. The results of the cluster analysis also raised the question of how much emphasis in rehabilitation service delivery was actually placed on improving client employment status as opposed to improving other areas of their lives and whether the emphasis which was given actually reflected what clients hoped to gain. The possibility still exists that counseling may have no utility in rehabilitation settings. It seems that if specific counseling outcomes are desired, specific intervention strategies must be developed by counselors. Also, multivariate measurement of counseling process and outcome variables is indicated for any systematic evaluation of counseling.



APPENDIX A

THE LEARNING UNIT

JOB GOALS ← → NEEDS LEARNING UNIT

a learning system to help identify
 work needs and job goals

An application of the Minnesota Theory of Work Adjustment

This learning unit is presented to you to help you find a job that you really want. You may already have a job in mind which is your ideal job goal. Or, maybe you are not quite sure as to what that job goal really is. Having a job goal is the first step toward finding a job you will like. Sometimes people are happy to get any job whether it's their ideal job or not. We think it's worth your time to at least try to come up with one job goal, or maybe even more, that will make you as satisfied with yourself as possible. We hope this learning unit will help you come up with at least one job goal that has a good chance of giving you satisfaction.

We have a special idea about jobs that we would like to pass on to you. People mostly think that they have to fit themselves into jobs. People hope that they will be lucky enough to find one that pays enough. Often, they don't think about finding one they will really like. People then, take any job which comes along, whether they have any idea they will like it or not; sometimes, people find that even if they make enough money, it becomes hard to put up with a job. People end up quitting these jobs because they just can't stand doing them any more. We hope this learning unit can give you a start on avoiding this problem. We want to help you take time to think about what you need to get out of a job before you start looking for work.

OK? Let's start. First, we want you to know that jobs have two things about them that are the same all over. Number one is that they give things to workers, like pay, satisfaction, and other rewards. Number two is that jobs have tasks which workers are asked to do well. Workers are required to have certain skills.

go on to next page

Before you go on, let's see how well you have learned so far. Without going back to the first page, try to answer these two questions. Every so often we will ask you questions like these. Don't worry about getting them wrong. These questions are meant to help you get the more important points. So, before you forget what you read, here are the questions.

- 1. The learning unit is meant to help you: (circle one)
 - a. get along with your counselor
 - b. set job goals
 - c. know about yourself
- Jobs have two things people should think about before they go to work. Circle the one that seems to you to have these two things:
 - a. co-workers and bosses
 - b. needs and rewards
 - c. rewards and skill demands
 - d. tasks and duties

turn the page for the answers

Answers to questions on page 2

The answer to question 1 is "b". If you circled "b", you are right.

If you didn't circle "b", we want to remind you that these units are

meant to teach you how to set job goals. OK?

The answer to question 2 is "c". You should have circled "rewards and skill demands". If you got this right, you can go on to the next page. You can forget the rest of this page unless your answer to question 2 is different.

If you didn't get these right, let's review a minute. You have to remember two things about jobs. The first thing is that jobs give rewards which are things like pay, satisfaction for doing a good job, and other things people like to get. The second thing is that jobs need people to do good work. This means that jobs require people to have the skills to do good work on the job. So, jobs have two things. They give rewards and they require skills. We think you've had enough of this, so you can go on to the next page, too.

We have just talked about two things jobs have in common. Rewards and skill demands. There are also two things that people have in common. These are just as important to remember. We already talked about the first one a little bit. This one is that people have needs. They need to know they can do a good job. People can have many different kinds of needs and they are all important. The second thing is that people have skills and talents. People may have different kinds of skills, but again, whatever skills they have are all important.

go on to the next page and try to answer the questions

	;
	',
	: :
	:

- 1. Circle the words that tell what people have in common when it comes to work. There are two of them that are most right. (circle two)
 - a. money
 - b. needs
 - c. skills
 - d. families to support
- 2. What could be a need that people have about work? Just write a need on this line:

go on to the next page to check your answers

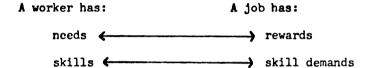
Answers to questions on page 5

- Question 1. If you circled "b" and "c", needs and skills, you are right.

 If you didn't, you better go back to page 4 to review.
- Question 2. If you wrote money, pay, wages, satisfaction, rewards, or something that usually makes people happy, you are getting the idea we are driving at.

go on to the next page

You have learned that jobs have two things in common which are important to remember. These are <u>rewards</u> for workers and <u>skill demands</u> for workers. You also learned that people have <u>needs</u> and <u>skills</u>. You might already have guessed that there is some connection between these. You're right. This is our next important idea. If these four things match up, the chances are good that the worker will last a long time at the job and do well. This usually means that a person will also be happy about the work. These four things go together like this:



In other words, if a worker's needs are taken care of by the rewards of the job and a worker's skills match the skill demands of the job, then the worker has a good chance of being a good worker, and being happy and satisfied besides. Being a good worker and a satisfied one is our goal for you.

go on and answer the question on the next page

Draw the arrows in to show how jobs and people match up to give satisfied and good workers.

People have:	Jobs have:
needs	skill demands
skills	rewards
	<pre>go on to the next page for the answer</pre>

Your arrows should go like this:



If your arrows crossed, you are right. Congratulations. You can go on to the next page. Don't bother to read the rest unless you made a mistake.

If your arrows don't cross, read on.

Remember, a worker's needs, such as a need for pay, can be taken care of by a job reward like wages. Money is a job reward that helps meet a worker's needs. In order for a person to be a good worker and get paid, a worker must have the skills to meet the skill demands of a job. A person has to drive well in order to be a bus driver. A skill demand of bus drivers is that they have the talent to drive and not have accidents. You are now ready to go on to the next page too.

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Now we are coming to our big point. For a long time, you have been getting ready for work. Most of this time has been spent in getting the skills necessary to do good work. All we ask now, is that you spend a little bit of time on what your needs are. We have told you that it is just as important for workers to have their needs taken care of as it is to have good skills. Both of these go together. In order for a job to be a good job for a worker, two things have to happen:

- your needs as a worker should be met by the rewards you get from the job, and
- your skills as a worker have to be good enough to get the job done right.

Keeping these two things in mind is what we try to do in all this learning unit. We want to help you know your needs and develop your skills so you can find the job that will be best for you.

go on to next page

In this part of the unit you will try to make job goals. A job goal is a name for a job that you really like. If you want to be a doctor your job goal is doctor. If you want to be a cook, your job goal is cook. Remember, a job goal is the name of one job you want to get.

If you have a job goal already in mind, write it down here:

If you don't have a job goal go to page 13.

If you wrote down a job goal go to page 12.

OK. Now we are going to work on helping you make some job goals. First, write down your job goal again, here:

We have listed many jobs in alphabetical order in the back of this booklet. We want you to try and find your job goal there. Think of some other names your job might have. Look for those too. The alphabetical list of jobs starts on page 25. Look for your job goal and circle it if you find it. Then, come back to this page whether you can find it or not.

If you found your job goal, go to page 15.

If you didn't find your job goal, that's ok, go to page 13.

For those of you who couldn't write down your job goal and for those of you who couldn't find your job listed, we have another way of helping you find job goals. First, we have to find out something about you. We have to know what skills you think you have for work.

First, let's try to come up with a number that describes your work skills right now. We have listed some numbers and after each number we have described what a worker needs to have to get that number. Read each one carefully and then check the one that you think describes you best.

	Read	these descriptions. If any one describes you, check it off.
	1.	You really aren't good at reading and writing but you can usually follow directions when someone shows you how.
	2.	You can read and write a little bit and follow instructions. You can take care of details as long as they stay pretty much the same.
***************************************	3.	You can read and write some, and do a little arithmetic. You really don't have any work experience but think you can learn from on-the-job training. (On-the-job training means that you can be hired and learn the job while you are working. You don't need any special training.)
	և.	You have abilities that you feel are equal to at least a high school education, and you have some special training in a skill or profession.
	5.	You have more than a high school education, with or without work experience. You are very capable in your field but you need more experience.
	6.	You have more than a high school education, with or without work experience. You have technical or professional training. You are an expert and don't really need supervision.
	If y	you have read them all carefully, write down in the blank after
this	sen	tence the number of the one that describes you best.
	Now	, read these descriptions. If any one describes you, check them
off.		·

go on to next page

			14		
	1.	You want a job that you can learn in a few minutes and where you do the same thing every day.			
	2.	You want a job that might take about a month to learn to do well, but that doesn't require more training.			
	3.	You want a job that you could learn in about three months but which doesn't require any more special vocational training.			
	4.	You want a job that you could learn in about six months which usually requires a high school education and some special training besides on-the-job training.			
	5.	You have had more than a high school education and either have had from six months to a year of special training or are willing and able to get it.			
	6.	You have at least one year of special training for a skill or profession.			
	7.	You have at least two years of special training for a skill or profession, possibly done through study in college.			
	8.	You have four or more years of special training for a skill or profession primarily done in college.			
	Afte	er you have gone over each of these carefully, check the one			
that	desc	cribes you best and write the number here.			
	Now	you have two numbers. These numbers stand for your skill level.			
Write your code here: * You will need it soon. Check the					
numbe	ers t	to make sure you wrote it down right.			

go on to page 17

In the next column are some more numbers. These are the numbers of tables which begin on page 33. Write down the table numbers which go with your job goal here:

You can forget the numbers in the last column. Your counselor needs those later.

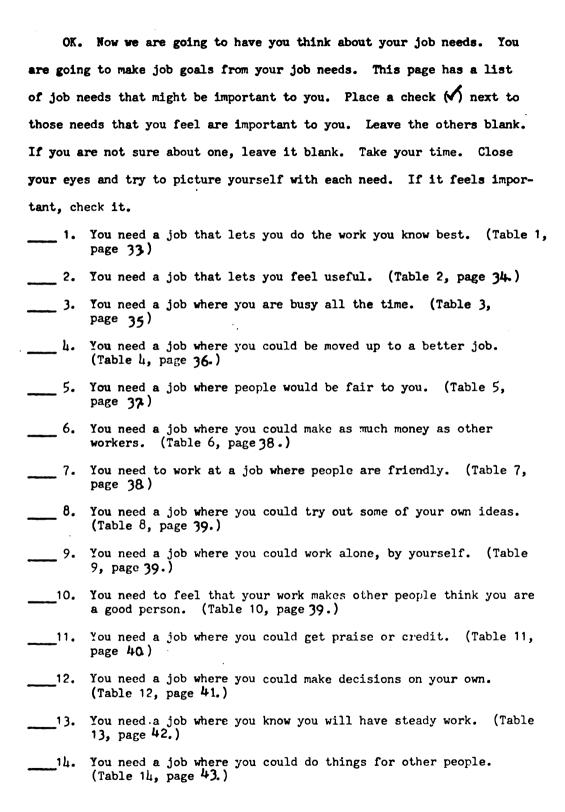
Now, go to those tables that you have written down. There are twenty tables where you will find job names listed. After each job name are two numbers with a * in between. These are skill codes for each job. Circle the jobs that have the same skill code as your job goal. Remember, the skill code has to be the same. Do this for each table you listed. The tables start on page 33.

go on to next page.

The jobs that you circled, even though they might be a lot different than your job goal, have a chance to meet your needs. These jobs may not be good for you right now because you may not have the special training needed to do them, but you might have. You can ask your counselor about these jobs if you want. Also, you can go through the same tables for other jobs that might interest you. The jobs are listed in order of skill demands. Any job whose numbers are less than yours is a job you might be able to do. If any look good to you, you can circle them also and later talk to your counselor about them.

Jobs with higher numbers are OK too, but they might require more training. If you want, you can ask your counselor about these too.

go on to the next page



15.	You need a job where you will feel as if you were "somebody big" in the community. (Table 15, page 44.)
16.	You need a job where you know your boss would back you up. (Table 16, page 44.)
17.	You need a job where your boss would train you well. (Table 17, page 44.)
18.	You need a job where you could do something different every day. (Table 18, page 45.)
19.	You need a job where your work would be clean and comfortable. (Table 19, page 46.)
20.	You need a job where you are hardly told what to do. (Table 20, page 46.)

go on to next page

Hang in there. Now that you have checked those that are important to you, take your time and look over those again which you checked. Now, choose four of them that are most important to you. This may be hard to do but force yourself to do it. Don't take too much time. Write down the most important one here:

	Table #	Page #
The next most important need here:		
		decidado contrato
The next most important need here:		

The next most important need here:		
	-	

Back on page 17, where you checked your needs, you'll find a table listed after each one and page numbers where tables can be found.

Write down those tables and page numbers in the space above next to your important job needs.

go on to next page

List the tables and their page numbers that you wrote down on page 19 in the spaces here:

Tables	Pages		
-			

Now, write down your skill code here: * ..

You can now go to the tables you listed on this page and circle the job names in those tables that have the same numbers as your skill code.

You can circle other ones, but remember that job names with higher numbers probably need people with more training than you have. You have a better chance with numbers that are less than your skill code. Go to the tables that go along with your four highest needs now. Circle those that have the same numbers as you and others you are interested in. You will talk with your counselor about these later. After you have gone through all four tables you can go on to page 21.

By now, you have hopefully circled quite a few job names that may be good job goals for you. We now want you to visit with your counselor and show what you have done. You and your counselor can now discuss how well the job goals you circled fit your abilities and whether the job goals are open in your area. Don't be surprised if you and your counselor find some job goals which might not work out. Write down the job goals you and your counselor keep on page 24. We hope you come up with some job goals. We at least hope you have learned about your job needs. We want you to keep this booklet because, who knows, maybe soon you'll have a chance to try for another job goal. In any case, good luck in your talk with your counselor. Don't forget to write down your job goals which you and your counselor decide to keep. You counselor should keep a copy of your job goal list too.

Before you go to your counselor, turn to the next page and try to answer the questions there. We want to know if we are doing a good job teaching you about jobs and your needs. Do your best but don't worry about any grades. After you finish, go to your counselor who will take your answers from you and talk to you about your job goals.

Thank you and go to page 22.

KNOWLEDGE ABOUT GOOD JOB GOALS

These are questions we would like you to answer. Take your time, but not too long. You won't be graded so you don't have to worry about mistakes, but do your best. When you are finished, show this to your counselor who will take it from you.

- Jobs have two things people should think about before they go to work. Circle the one that seems to have these two things.
 - a. co-workers and bosses
 - b. needs and rewards
 - c. rewards and skill demands
 - d. tasks and duties
- From these statements, pick out the one that seems most like a need someone might have about work.
 - a. a need for exercise
 - b. a need to feel useful
 - c. a need for love
 - d. a need for leisure time
- 3. A worker's needs can be met by: (circle one)
 - a. having good things to do after work.
 - b. not making the boss angry.
 - c. getting along with co-workers.
 - d. getting the right rewards from the job.
 - e. being a good worker.
- 4. For most of your life, you have tried to gain skills so you would be a good worker. You should also think about: (circle one)
 - a. spending time with your family.
 - b. getting enough education.
 - c. having good connections.
 - d. knowing what needs work should satisfy for you.
- 5. It's important to have job goals after you begin looking for work.
 - a. true
 - b. false
- Give at least one example besides money of something that people may want to get out of work.
- 7. What else should people think about besides skills when they start making job goals?

- 8. People should set job goals: (circle one)
 - a. to find a job that pays enough.
 - b. to save a lot of time.

 - c. to avoid getting a job they don't like.d. so they can get the right kind of training.
- 9. Your needs as a worker can be met off the job to make up for your needs not being met on the job.

 - a. trueb. false
- 10. Your _____ as a worker have to match the demands of the job.

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List the job goals you and your counselor think are good ones for you now. Ask your counselor to make a list too.

1.

2.

3.

4.

5.

Use as much space as you want

You can use this list of job titles to find your job goal. If you can't find it try to think of other names that might be used for your job goal or look for others that might be close to it. Don't forget to circle those that you choose for your job goals. If you can't find any at all, go to page where you can try another way to find job goals.

	ILL CODE	TABLES (pages 33 to 46	DOT num,
accountant, cert. public	5*8	1,2,4,11,12,14,18	160.188
accountant, cost	5*8	4	160.188
account executive	6*7	1,2,4,6,10,11,12,15,18	251.258
accounting clerk	4*4	3	219.488
adjustment clerk	4 *4	7	249.368
administrative clerk ·	4*4	3,7	219.388
air-conditioning mechanic	4*8	6,9	637.281
air-conditioning service	4*8	6,9	637.281
aircraft engine mechanic	4 *7	7,13	621.281
aircraft mech.engine chge	.4*7	7,13	621.281
aircraft mechanic shop	4*7	7,13	621.281
airplane hostess	3*3	6,7,14	352.878
airplane pilot, commercial	. 5*6	4,6,7	196.283
application clerk	3*3	7	352.878
architect	6*8	1,2,4,8,12	001.081
architectural draftsman	4*7	4,19	001.281
assembler electrical equi	.3*6	5,19	827.884
assembler production	2*2	3,5	706.887
assembler small parts	2*2	19	706.884
automatic-screw machine			
operator	2*3	4,11,17	604.885
autobody repairman	3*7	13	807.381
autobody worker	3*7	13	807.381
auto mechanic	4*7	1.3	620.281
auto salesman	4*5	1,5,6,11,16	280.358
auto seat-cover-and-con-			
vertible top installer	3*4	5,17	780.884
auto service station		•	
attendant	3*3	14	915.867
auto upholstery,trim			
installer	3*4	5,17	780.884
baker	3*7	3,13	526.781
bank teller	4*5	7,13,19	212.368
bar attendant	3*3	13,19	312.878
barber	3*5	1,9,19	330.371
barkecper	3*3	13,19	312.878
bar-machine operator prod	.2*3	4,11,17	604.885
barman	3*3	13,19	312.878
bartender	3*3	13,19	312.878
battery assembler	1*2	17	727.887
beautician	4*6	1,18,14	332.271
beauty culturist	4*6	1,14,18	332.271

JOB TITLE SK	ILL CODE	TABLES	DOT num.
beauty operator	4*6	1,8,14	332.271
bench assembler	2*2	19	706.884
bill collector	3*4	1,3,11,12,20	240.368
binder	3*6	13	977.884
body & fender repairman	3*7	13	807.381
body-line finisher	3*7	13	807.381
body man	3*7	13	807.381
boiler operator	4*7	9,13,19	950.782
bookbinder	3*6	13	977.884
bookkeeper I	4*6	19	210.388
bottler brewery	2*2	4,17,19	920.885
bricklayer	3*8	1,2	861.381
broker, securities	6*7	1,2,4,6,10,11,12,15	
bumper	3*7	13	807.381
bus driver	3*5	5,9,16,17	913.463
business-machine mechan		1,4,9,13,18	633.281
butcher	3*7	3,6,13	316.884
	3 ,	3,0,13	310.004
cab driver	3*3	9	913.463
cabinetmaker	4*6	3.13	660.280
card-punch operator	3*4	3,13	213.582
carpenter	4*8	5,6	860.381
carpenter, bench	4*8	5,6	860.381
caseworker	5*7	1,3,5,14	195.108
cashier-checker	3*2	3,5,6,19	299.468
cement finisher	3*6	2 ,	844.884
cement mason	3*6	2	844.884
cement paver	3*6	2	844.884
certified public accoun	t.5*8	1,2,4,11,12,14,18	160.188
chauffeur, motorbus	3*5	5,9,16,17	913.463
checker-marker	2*2	3,5,17	920.887
checkout cashier	3*2	3,5,6,19	299.468
civil engineer	5 * 8	3,4,20	005.081
claim adjuster	5*8	3,4,20 1,4,5,9,12,18	241.168
claim examiner	5*7	4,5,12,20	168.288
claims analyst	5*7	4,5,12,20	168.288
claims auditor	5*7	4,5,12,20	168.288
claims representative	5*7	4,5,12,20	168.288
claims reviewer	5*7	4,5,12,20	168.288
clerk	3*4	3,7	219.388
clerk-stenographer	3*5	13,19	202.388
cobbler	3*7	3,9,14	365.381
collection agent	3*4	1,3,11,12,20	240.368
collector	3*4	1,3,11,12,20	240.368
commercial artist	5*7	1,2,4,8,11,18	141.081
commercial pilot	5*6	4,6,7	196.283
communication technicia	n 4*7	1,2,13,19	828.281
composing-machine opera	t.4*5	13	650.582
compositor	4*8	9	973.381
computer operator	4*6	3,4,19	213.382
computer programmer	5*7	1,2,4,11	020.188

JOB TITLE S	KILL CODE	TABLES	DOT num.
concrete finisher	3*6	2	844.884
console operator	5*7	3,4,19	213.382
consulting decorator	5*7	1,2,11,12,14,18,20	142.051
contract clerk (new accou		7	249.368
control board operator	3*3	4,5,7,13,19	235.862
cook restaurant	4*7	11,13	313.381
cosmetician	4*6	1,8,14	332.271
cosmetologist	4*6	1,8,14	332.271
cost accountant	5*8	1,2,4,11,12,14,18	160.188
counselor, private employ		, 1,2,4,11,12,14,10	100.100
ment agency	5*7	12,14	045.108
counselor,school	5*7	1,3,12,14,18,20	045.108
counselor, voc. rehab.	5*7	1,2,8,12,14,18,20	045.108
cylinder press feeder	2*2	4,16,17,19	651.886
cylinder pressman helper	2*2	4,16,17,19	651.886
day clerk	3*4	13	242.368
delivery man	3*5	9,13	292.358
delivery-truck driver	3*5	9,13	292.358
department head supermar		3,4,19	299.138
desk clerk	3*4	13	299.138
die-&-tool maker	4*7	13	601.280
dietician	4*7	12,13,14,20	077.168
digital-computer operato		3,4,19	213.382
draftsman	4*7	4,19	001.281
driver-salesman	3*5	9,13	292.358
druggist	5*7	6,13,14,19	074.181
efficiency expert	5*8	1,4,8,11,12,20	012.188
electrical engineer	6*8	1,2,12	003.081
electrical technician	4*7	1,11,19	003.081
electrician	4*7	4	824.281
electrician, elevator	4,	~	024.201
maintencance	4*7	4,6,18	829.281
electric-lab technician	5 * 7	1,11,19	003.181
electronics equip.mechan		1,2,13,19	828.281
electronics maint. man	4*7		828.281
electronics technician	4 * 7	1,2,13,19	003.181
elementary school teache		1,11,19	
elevator mechanic	4*7	1,2,3,8,12,14,18	092.228
elevator repairman	4*7	4,16,18	829.281
embalmer	4*7	4,16,18	829.281
		14	338.381
engineer,civil	5*8	3,4,20	005.081
engineer, mechanical	6*8	1,4,12,20	007.081
engineer, stationary	4*7 5::-0	9,13,19	950.782
engineer, time-study	5*8	1,4,8,11,12,20	012.188
fender-&-body repairman	3*7	13	807.381
fields-claims represent.	5*8	1,4,5,9,12,18	241.168
filling-station attendan		14	915.867
finisher & bookbinder	3*6	13	977.884
fire fighter	3*6	13,14	373.884
fireman	3*6	13,14	373.884
flat bed press feeder	2*2	4,6,17,19	651.886

JOB TITLE SK	ILL CODE	TABLES	DOT num.
floor clerk, hardware	4*6	3,13,18	276.358
floral designer	5*7	2,10,11,18	142.081
foreign langquage steno.	3*6	13,19	202.388
front clerk	3*4	13	242.368
full-charge bookkeeper	4*6	19	210.388
furnace installer&repairma		6	869.281
furnaceman	4*7	6	869.281
garageman	4*7	1,3	620.281
garage mechanic	4*7	1,3	620.281
garage repairman	4*7	1,3	620.281
gasman	3 *3	14	915.867
gas station serviceman	3*3	14	915.867
gas station attendant	3*3	14	915.867
general bookkeeper	4*6	19	210.388
general production worker	40	17	210.300
(Sood)	1)1*2	13	529.886
general teller	4*5	7,13,19	212.368
girl friday	4*6	14	201.368
glass installer	3*7	18	865.781
glass setter	3*7	18	865.781
glass worker	3*7	18	
glazier	3*7	18	865.781
guidance counselor	5*7		865.781
gardance counselor	J~1	1,3,12,14,18,20	045.108
haircutter	3*5	1,9,19	330.371
handbook writer	5*7	1,2,4	139.288
handyman, factory or mill	4*7	18	899.281
heavy equipment operator	3*5	6	859.883
highway engineer	5*8	13	005.081
hospital attendant	3*4	14	355.878
hospital orderly	3*4	14	355.878
hospital pharmacist	5*7	6,13,14,19	074.181
hostess/host	3*3	6,7,14	352.878
hotel clerk	3*4	13	219.388
	,		217,300
illustrator	5*7	1,2,4,8,11,18	141.081
instructor, trade school	4* 7	1,2,8,11,14,18	097.228
instructor, vocational trng	; . 4*7	14,20	097.228
insurance adjuster	5*8	1,4,5,9,12,18	241.168
insurance agent	4*6	1,2,4,6,9,11,12,14,18	
interior decorator	5*7	1,2,11,12,14,18,20	142.051
interior designer	5*7	1,2,11,12,14,18,20	142.051
investigator	5*8	1,4,5,9,12,18	241.168
janitor	3*3	13,14	382.884
han more to a constant	2.1.4	•	
key-punch operator	3*4	3,13	213.582
kiln repairman	4*6	1,2	861.381
labeler	1*1	3,5,17	920.887
landscape gardener	4*7	2	407.181
landscaper	4 * 7	2	407.181
	• •	_	107,101

lather 6*1 3 842.7 legal stenographer 3*5 13,19 202.3 letter carrier 3*3 9,13 233.3 librarian 5*7 3,10,14 100.1 line&station installer 3*6 4,5,13,17 822.3 lineman,telephone 4*7 4,5,13,17 822.3 linotype operator 4*5 9 650.5 lithographic press-feeder 2*2 4,6,17,19 651.8 lithographic press plate maker 3*7 6,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 mail man 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man,factory 4*7 18 899.2 maintenance man,elevators 4*7 4,16,18 829.2 manager,production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	um.
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librarian 5*7 3,10,14 100.1 line&station installer 3*6 4,5,13,17 822.3 lineman,telephone 4*7 4,5,13,17 822.3 linotype operator 4*5 9 650.5 lithographic press-feeder 2*2 4,6,17,19 651.8 lithographic press plate 847 6,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man,factory 4*7 18 899.2 maintenance man,elevators 4*7 4,16,18 829.2 manager,production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	88
line&station installer 3*6 4,5,13,17 822.3 lineman,telephone 4*7 4,5,13,17 822.3 lineman,telephone 4*5 9 650.5 lithographic press-feeder 2*2 4,6,17,19 651.8 lithographic press plate maker 3*7 6,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man,factory 4*7 18 899.2 maintenance man,elevators 4*7 4,16,18 829.2 marker 2*2 3,5,17 920.8	88
lineman, telephone 4*7 4,5,13,17 822.3 linotype operator 4*5 9 650.5 lithographic press-feeder 2*2 4,6,17,19 651.8 lithographic press plate 0,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 mailman 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man, factory 4*7 18 899.2 maintenance man, elevators 4*7 4,16,18 829.2 manager, production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	68
lineman, telephone 4*7 4,5,13,17 822.3 linotype operator 4*5 9 650.5 lithographic press-feeder 2*2 4,6,17,19 651.8 lithographic press plate 0,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 mailman 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man, factory 4*7 18 899.2 maintenance man, elevators 4*7 4,16,18 829.2 manager, production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	81
linotype operator 4*5 9 650.5 lithographic press-feeder 2*2 4,6,17,19 651.8 lithographic press plate maker 3*7 6,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 mailman 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man, factory 4*7 18 899.2 maintenance man, elevators 4*7 4,16,18 829.2 manager, production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	81
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lithographic press plate maker 3*7 6,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 mailman 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man, factory 4*7 18 899.2 maintenance man, elevators 4*7 4,16,18 829.2 manager, production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	86
maker 3*7 6,13,19 972.7 lumber yard man 2*3 5 922.8 machinist 4*7 1,2,13 600.2 maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 mailman 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man, factory 4*7 18 899.2 maintenance man, elevators 4*7 4,16,18 829.2 manager, production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	
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maid(hotel) 2*2 13,14,19 323.8 mail carrier 3*3 9,13 233.3 mailman 3*3 9,13 233.3 maintenance engineer 4*7 9,13,19 950.7 maintenance man, factory 4*7 18 899.2 maintenance man, elevators 4*7 4,16,18 829.2 manager, production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	
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maintenance man, elevators 4*7 4,16,18 829.2 manager, production 5*7 1,4,8,11,12,20 012.1 marker 2*2 3,5,17 920.8	
manager, production 5*7 1,4,8,11,12,20 012.10 marker 2*2 3,5,17 920.8	
marker 2*2 3,5,17 920.8	
meat counterman 3*6 3,6,13 316.8	84
meat cutter 3*6 3,6,13 316.8	84
meatman 3*6 3,6,13 316.8	84
mechanical engineer 6*8 1,4,12,20 007.0	81
medical stenographer 3*5 13,19 202.3	88
medical technolgist 5*7 7,10,13 078.3	81
metal patternmaker 4*8 1,6,9,11,18 600.2	80
methods-&-procedures man 5*7 1,4,8,11,12,20 012.1	88
new car salesman 4*5 1,5,6,11,16 280.3	58
newspaper publisher 6*8 1,2,3,8,11,12,15,18 132.0	
nurse 5*7 2,3,13,14 075.3	
nurse aid 3*4 14 355.8	
nurse, licensed practical 4*6 2,13,14 075.3	
nurse registered 5*7 2,3,13,14 075.3	
nursing assistant 3*4 14 355.8	
occupational therapist 4*7 1.2.7.8.12.14.18.20 079.1	50
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office-equipment mechanic 4*7 1,4,9,13,18 633.2	
office-equipment serviceman 4*7 1,4,9,13,18 633.2	
operating engineer 3*5 6 859.8	
optometrist 5*7 1,2,6,12,14,15,19 079.1	
order clerk 4*6 7 249.3	
orderly 3*4 14 355.8	
outside collector 3*4 1,3,11,12,20 240.3	68
packer-labeler 2*2 3,5,17 920.8	
painter-decorator 3*7 1,2 840.7	81
painter-paperhanger 3*7 1,2 840.7	81

JOB TITLE	SKILL CODE	TABLES	DOT num.
patrolman	3*4	12,13,14	375.268
patternmaker, metal	4*8	1,6,9,11,18	600.280
PBX operator	3*3	4,5,7,13,19	235.862
personnel clerk	4*3	5 , , ,	205.368
personnel records clerk	4*3	5	205.368
pharmacist	5*7	6,13,14,19	074.181
photoengraver(stripper)	3*6	1,6	971.381
photographer, commercial	4*7	18	143.062
physical therapist	4*7	1,2,7,11,14	079.378
physiotherapist	4*7	1,2,7,11,14	079.378
pilot	5*7	4,6,7	196.283
pipefitter	4*8	6 ' '	862.381
plant maintenance man	4*7	18	899.281
plasterer	3*7	3	842.781
plumber	4*7	6	862.381
plumber-pipefitter	4*7	6,9	637.281
policeman	3*4	12,13,14	375.268
police officer	3*4	12,13,14	375.268
postman	3*3	13	233.388
postoffice clerk	4*4	13	232.368
powerman	4*7	9,13,19	950.782
powerplant operator	4*7	9,13,19	950.782
press plate-maker	3*7	6,13,19	972.781
printing-card-punch opera	-	3,13	213.582
printing-punch operator	3*4	3,13	213.582
private-branch-exchange		-,	2237302
	tor 3*6	4,5,7,13,19	235.862
production engineer	5*7	1,4,8,11,12,20	012.188
production helper	1*2	13	529.886
programmer technical	5*7	1,2,4,11	020.188
pumpman	3*3	14	915.867
punch operator	3*5	13,19	615.782
punch-press operator	3 *5	13,19	615.782
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radiologic technologist	4*6	14	078.368
real-estate agent	4*6	1,2,6,10,12,14,1	
g			20 250.358
realtor	4*6	1,2,6,10,12,14,1	
	. •		20 250.358
reception clerk	3*5	14,18	237.368
receptionist	3*5	14,18	237.368
registered account adviso		1,2,4,6,10,11,12	
registered nurse	5 * 7	2,3,13,14	075.378
registered pharmacist	5 * 7	6,13,14,19	074.181
repossessor	3 * 3	12	240.368
roofer	3*7	6	866.381
route agent	3*5	9,13	292.358
route driver	3*5	9,13	292.358
route man	3*5	9,13	292.358
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JOB TITLE	SKILL CODE	TABLES	DOT num.
sales clerk	3*4	3,5	289.458
salesman_automobile	4*5	1,5,6,11,16	280.358
salesman, driver	3*5	9,13	292.358
salesman,life insurance	4*6	1,2,4,6,9,11,12,14	
,		1,1,1,1,1,1	8 250.258
salesman, real estate	4*6	1,2,6,10,12,14,18,	20250.358
salesman, route	3*5	0 12	202 259
salesman, securities	6*7	1,2,4,6,10,11,12,1	.5/
•			20251.258
salesperson	3*4	3,5	289.458
salesperson, furniture	4*4	1,6,11,19	274.358
salesperson, general	3*4	3,5	289.458
salesperson, gen. hardware	4*6	3,13,18	276.358
salesperson, liquor	3*4	3,5	289.458
salesperson, meats	3*6	3,6,13	316.884
salesperson, shoe	4*6	4,5,19	263.358
salesperson, sporting good	s 4*4	1,13,19	286.358
school counselor	5*7	1,3,12,14,18,20	045.108
scientific programmer	6*8	1,2,4,11	020.188
screw-machine operator	2*3	4,11,17	604.885
secondary school teacher	5 * 7	1,14,18	091.228
secretarial stenographer	4*6	14	201,368
secretary(general office)	4*6	14	201.368
securities advisor	6*7	1,2,4,6,10,11,12,1	5 251.258
service publication write	r 5*7	1,2,4	139.288
service representative	3*5	7	249.368
service-station attendant	3*3	14	915.867
sewing-machine operator	2*2	5	787.885
sheetmetal journeyman	4*7	1,2,13	804.281
sheetmetal worker	4*7	1,2,13	804.281
shoe clerk	4*6	4,5,19	263.358
shoemaker	3*7	3,9,14	365.381
shoe repairman	3*7	3,9,14	365.381
shoe salesman	4*6	4,5,19	263.358
social worker	5*7	1,3,5,14	195.108
solderer,production line	2*2	3,5,19	814.884
solicitor	4 *6	1,2,4,6,9,11,12,14	250.258
stamper	2*2	3,5,17	920.887
standards engineer	5*8	1,4,8,11,12,20	012.188
stationary engineer	4*7	9,13,19	950.782
stationary-engine man	4*7	9,13,19	950.782
station installer	3 *6	13,14,19	822.381
statistical-machine		1,2,4,5,6,9,11,12,	13
serviceman	4*7	16,17,18,19,20	633.281
statistician, analytical	5*7	1	020.188
statistician,applied	5*7	1	020.188
steward,dining room	3*3	14	311.878
stewardess	3*3	6,7,14	352.878
study supervisor, school	3*2	11,14,19	099.378
superintendant, building	3*3	13,14	382.884
switchboard operator	3*3	4,5,7,13,19	235.862

JOB TITLE SKI	LL CODE	TABLES	DOT num
taxi driver	3*3	9	913.463
teacher, adult education	5*7	1,12,14	099.228
teacher aide	3*2	11,14,19	099.368
teacher, elementary school	5*6	1,2,3,8,12,14,18	092.228
teacher,high school	5*7	1,14,18	091.228
teacher, trade school	4*7	1,2,8,11,12,14,18	097.228
teacher, vocational training	4*7	14,20	097.228
technical editor	5*7	1,2,4	139.288
technical programmer	5*7	1,2,4,11	020.188
technical writer	5*7	1,2,4	139.288
telephone installer	4*7	13,14,19	822.381
telephone operator	3*3	4,5,7,13,19	235.862
telephone switch-board oper.	3*3	4,5,7,13,19	235.862
television&radio repairman	4*7	1,5	720.281
teller(banking)	4*5	7,13,19	212.368
tile fitter	3*7	6,12,20	861.781
tile setter(ceramic)	3*7	6,12,20	861.781
tile mason	3*7	6,12,20	861.781
time-study analyst	5*8	1,4,8,11,12,20	012.188
time-study engineer	5*8	1,4,8,11,12,20	012.188
tool-and-die maker	4*7	13	601.280
top-and-seat cover fitter	3*4	5,17	780.884
touch-up finisher, metal	3*7	13	807.381
transfer man	3*4	5,6,13	904.883
truck driver	3*3	5,6,13	904.883
truck operator	3*3	5,6,13	904.883
type setter	4*8	9	973.381
typist	3*3	3,14	203.588
typographer	4*5	9	973.381
used-car salesman	4*5	1,5,6,11,16	280.358
usher(theater)	2*2	7,14	344.878
utilityman	1*2	5	922.887
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vocational advisor	5*7	12,14	045.108
vocational counselor	5*7	1,2,8,12,14,18,20	045.108
waiter,banquet	3*3	14	311.878
waiter	3*3	14	311.878
waitress	3*3	14	311.878
waste-elimination man	5*8	1,4,8,11,12,20	012.188
watch engineer	4*7	9,13,19	950.782
welder, combination	3*6	6	812.884
wireman	4*7	4	824.281
work-measurement engineer	5*8	1,4,8,11,12,20	012.188
writer, publications	5*7	1,2,4	139.288
writer, technical publications		1,2,4	139.288
x-ray technologist	4*6	14	078.368

Job Title	SKILL Code	DOT num.
architect	6*8	001.081
engineer, mechanical	6*8	007.081
newspaper publisher	6*8	132.018
salesman, securities	6*7	251.258
accountant (certified public)	5*8	160.188
claim adjuster	5*8	241.168
engineer, time-study	5*8	012.188
caseworker	5 *7	195. 108
commercial artist	5 *7	141.081
counselor, school	5*7	045.105
counselor, vocational rehabilitation	5*7	045.108
interior designer and decorator	5*7	142.051
optometrist	5*7	079.108
programmer business, engineering & science	e 5*7	020.185
statistician, applied	5*7	020.188
teacher, adult education	5*7	099.228
teacher, secondary school	5*7	091.228
writer, technical publications	5*7	139.288
teacher, elementary school	5*6	092.228
pattern maker, metal	4 *8	600.280
automobile mechanic	4 *7	620.281
electrical technician	4 *7	003.181
instructor, trade school	4 *7	097.228
occupational therapist	4*7	079.128
office-machine serviceman	4*7	633.281
physical therapist	4*7	079.378
statistical machine serviceman	4*7	· 633.281
television service and repairman	4 *7	720.281
beauty operator	4*6	332.271
salesman, life insurance	4*6	250.258
salesman, real estate	4*6	250.358
salesman, automobile	4*5	280. 358
salesperson, furniture	4*4	274.358
photoengraver (stripper)	3*6	971.381
barber	3*5	330.371
collector (bill collector)	3*4	240.368

Job Title	SKILL Code	DOT num.
architecht	6*8	001.081
newspaper publisher	6 *8 ·	132.018
salesman, securities	6*7	251.258
accountant, certified public	5*8	160.188
commercial artist	5 * 7	141.051
counselor, vocational rehabilitation	5*7	045.108
interior designer & decorator	5*7	142.051
nurse, professional	5*7	075.378
optometrist	5*7	079.108
programmer (business, engineering,		3,7,0233
and science)	5*7	020.188
writer, technical publications	5 *7	139.288
teacher, elementary school	5 * 6	092.228
floral designer	4*7	142.081
instructor, trade school	4*7	097.228
occupational therapist	4*7	079.128
physical therapist	4*7	079.378
statistical-machine serviceman	4*7	633.281
nurse, licensed practical	4*6	079.378
salesman, life insurance	4*6	250.258
salesman, real estate	4 *6	250.3 58

Job Title	SKILL Code	Dot. num.
newspaper publisher	6 * 8	132.018
lather	6*1	842.781
engineer, civil	5*8	005.081
caseworker	5*7	195.108
counselor, school	5 *7	045.108
librarian	5*7	100.168
nurse, professional	5 * 7	075.378
teacher, elementary school	5*6	092.228
automobile mechanic	4 *7	620.281
department head, supermarket	4 *7	299.138
digital computer operator	4 *6	213.382
salesperson, general hardware	4*6	276.358
accounting clerk	4*4	212.488
baker	3 *7	526.781
plasterer	3 *7	842.781
shoe repairman	3 *7	365.381
meat cutter	3*6	316.884
clerk	3*4	219.388
collector (bill collector)	3*4	240.368
key-punch operator	3*4	213. 582
salesperson (general department store)	3*4	289.458
typict	3*3	203.588
cashier-checker	3*2	299.468
assembler, production	2*2	706.887
marker	2*2	920.881
solderer (production line)	2*2	814.884

Job Title	SKILL Code	DOT num.
architect	6*8	001.081
engineer, mechanical	6*8	007.081
salesman, securities	6*7	251.258
accountant, certified public	5*8	160. 188
accountant, cost	5*8	160.188
claim adjuster	5*8	241. 168
engineer, civil	5*8	005.281
engineer, time study	5*8	012.188
claim examiner	5*7	168.2 88
commercial artist	5*7	141.081
programmer (business, engineering,	5*7	020.188
and science)		
writer, technical publications	5*7	139. 288
airplane pilot, commercial	5*6	196.283
department head, supermarket	4*7	29 9.138
draftsman, architectural	4*7	001.281
electrician	4*7	824.281
elevator repairman	4 *7	829.281
lineman (telephone)	4 *7	822.381
office machine serviceman	4*7	63 3.281
statistical machine serviceman	4*7	633.281
digital computer operator	4*6	21 3.382
salesman, life insurance	4*6	250.188
salesperson, shoe	4*6	263. 358
telephone operator	3*3	235.8 62
screw machine operator, production	2*3	604.8 85
lithographic press feeder	2*2	651.8 86

Job Titles	SKILL Code	DOT num.
claim adjuster	5*8	241.168
case worker	5 *7	195.108
claim examiner	5 * 7	168.288
carpenter	4*8	860.381
lineman (telephone)	4*7	822.381
statistical machine serviceman	4*7	633.281
television service and repairman	4 *7	720.281
salesperson, shoe	4*6	363.3 58
salesman, automobile	4*5	280.3 58
personnel clerk	4*3	205.368
assembler (electrical equipment)	3*6	827.884
bus driver	3*5	913.463
automobile seat cover and convertible		
top installer	3*4	180.884
salesperson, general (department store)	3*4	289. 458
telephone operator	3 *3	235.862
truck driver	3 *3	904.883
cashier-checker	3*2	299.468
lumber yard man	2*3	922.887
assembler, production	2*2	706.887
bottler, brewery	2*2	920.8 85
marker	2*2	920.8 87
sewing machine operator, automatic	2*2	787.885
solderer (production line)	2*2	814.884
battery assembler	1*2	727.887

Job Titles	SKILL Code	DOT num.
salesman, securities	6*7	251.258
optometrist	5*7	079.108
pharmacist	5*7	074.181
airplane pilot, commercial	5*6	196.283
air conditioning mechanic	4 * 8	637.281
carpenter	4 * 8	860.381
patternmaker, metal	4*8	600.280
pipefitter	4*8	862.381
elevator repairman	4*7	829.281
furnace installer and repairman	4*7	027,207
plumber	4*7	862.381
statistical mechanic serviceman	4*7	633,281
salesman, life insurance	4*6	250,258
salesman, real estate	4*6	250.358
salesman, automobile	4*5	280.358
salesperson, furniture	4*4	274.358
lithographic press plate maker	3*7	972.781
roofer	3*7	866.381
tile setter (ceramic)	3*7	861.781
meat cutter	3*6	316.884
photoengraver (stripper)	3*6	971.381
welder (combination)	3*6	812.884
heavy equipment operator (construction)	3*5	859.883
airplane stewardess	3 *3	352.878
truck driver	3*3	904.883
cashier-checker	3*2	299.468
bottler, brewery	2*2	920.885
lithographic press feeder	2*2	651.886

Job Titles	SKILL Code	DOT num.
medical technologist	5*7	078.381
airplane pilot, commercial	5*6	196.383
aircraft and engine mechanic, shop	4*7	621.281
occupational therapist	4*7	079.128
physical therapist	4*7	079.378
teller (banking)	4*5	212.368
service representative (telephone)	3*5	249.368
clerk	3*4	219.388
airplane stewardess	3*3	352.878
telephone operator	3*3	235.862
usher (theater)	2*2	344.878

Job Titles	SKILL Code	DOT num.
architect	6*8	001.081
newspaper publisher	6*8	132.018
engineer, time study	5*8	012.188
commercial artist	· 5 * 7	141.081
counselor, vocational rehabilitation	5*7	045.108
teacher, elementary school	5*6	092.228
instructor, vocational training	4*7	097.228
occupational therapist	4*7	079.128
beauty operator	4*6	332.271

TABLE 9

Job Titles	SKILL Code	DOT num.
claim adjuster	5*8	241.168
	4*8	637.281
<u> </u>	4*8	973.381
	- 4*8	600.280
	4*7	950.782
	4*7	633.281
	4*7	633.281
	4*6	250.258
	3*7	365.381
•	3*5	330.371
	3*5	913.463
	3*5	292.358
	• •	233.388
taxi driver	3*3	913.463
claim adjuster air conditioning mechanic compositer patternmaker, metal engineer, stationary office machine serviceman statistical machine serviceman salesman, life insurance shoe repairman barber bus driver salesman, driver mail carrier	5*8 4*8 4*8 4*8 4*7 4*7 4*7 4*6 3*7 3*5 3*5 3*5	241.16 637.28 973.38 600.28 950.78 633.28 633.28 250.25 365.38 330.37 913.46 292.35 233.38

Job Titles	SKILL Code	DOT num.
1	6*7	251.258
salesman, securities	5*7	142.081
floral designer	5*7	100.168
librarian	5 * 7	078.381
medical technologist	4*6	250.358

Job Titles	SKILL Code	DOT num.
newspaper publisher	6*8	132.018
salesman, securities	6*7	251.258
accountant, certified public	5*8	160.188
engineer, time study	5*8	012.188
commercial artist	5*7	141.081
floral designer	5*7	142.081
interior designer and decorator	5 * 7	142.051
programmer (business, engineering,		
and science)	5*7	020.188
optometrist	5*7	079.108
patternmaker, metal	4*8	600.280
cook (hotel-restaurant)	4*7	313.381
electrical technician	4*7	003.181
instructor, vocational training	4*7	097.228
physical therapist	4*7	079.378
salesman, life insurance	4*6	280.358
	4*5	280.358
salesman, automobile	4*4	
salesperson, furniture		274.358
collector (bill collector)	3*4	240.368
teacher aide	3*2	099. 368
screw machine operator, production	2*3	604.8 85

Job Titles	SKILL Code	DOT num.
architect	6*8	001.081
newspaper publisher	6*8	132.018
engineer, mechanical	6*8	007.081
salesman, securities	6*7	251.258
accountant, certified public	5*8	160.188
claim adjuster	5*8	241,168
engineer, civil	5*8	005.081
engineer, time study	5*8	012.188
claim examiner	5*7	168.288
counselor, school	5*7	045.108
counselor, private employment agency	5*7	045.108
counselor, vocational rehabilitation	5*7	045.1 08
interior designer and decorator	5*7	142.051
optometrist	5*7	079.108
teacher, adult education	5*7	099.228
teacher, elementary school	5*6	092,228
dietician	4*7	077.168
instructor, vocational training	4*7	097.228
occupational therapist	4*7	079.128
statistical machine serviceman	4*7	633.281
salesman, real estate	4*6	250. 358
salesman, life insurance	4*6	250.255
tile setter (ceramic)	3*7	861.781
collector (bill collector)	3*4	240.368
policeman	3*4	375.268
reposessor	3*3	240.368

Job Titles	SKILL Code	DOT num.
highway engineer	5*8	005.081
medical technologist	5*7	078.381
nurse, professional	5 *7	075.378
pharmacist	5*7	074.181
aircraft and engine mechanic shop	4 *7	621.281
cook (hotel - restaurant)	4 *7	313.381
dietician	4 *7	077.168
engineer, stationary	4 *7	950.782
lineman (telephone)	4 *7	822.387
office machine serviceman	4 *7	633.281
statistical machine serviceman	4 *7	633.281
telephone installer	4*7	822.381
tool and die maker	4 *7	601.280
nurse, licensed practical	4*6	679.378
salesperson, general hardware	4*6	276.358
teller (banking)	4*5	212.368
post office clerk	4*4	232.368
automobile body repairman	3 *7	807.381
baker	3*7	526.781
lithographic press plate maker	3*7	972.781
bookbinder	3*6	977.884
fire fighter	3*6	373.884
meat cutter	3*6	316.884
salesman driver	3*5	292.358
hotel clerk	3*4*	219.388
key-punch operator	3*4	213.582
policeman	3*4	375.268
janitor	3*3	382.884
mail carrier	3*3	233.388
telephone operator	3*3	235.862
truck driver	3*3	904.883

TABLE 14

Job Titles	SKILL Code	DOT
Job littles	OKILL Code	DOT num.
HIGH:		
caseworker	5*7	195.108
counselor, school	5 *7	045.108
librarian	5*7	100.168
nurse, professional	5*7	075.378
optometrist	5*7	079.108
teacher, secondary school	5*7	091.228
teacher, elementary school	5*6	092.228
embalmer	4*7	338.381
instructor, vocational training	4*7	097.228
occupational therapist	4 * 7	079.128
physical therapist	4*7	079.378
beauty operator	4*6	332.271
nurse, licensed practical	4 * 6	079.378
salesman, life insurance	4*6 3+5	250.258
receptionist, civil service	3*5 3*4	237.368
nurse aid orderly	3*4 3*4	355.878
	3*3	355.878
airplane stewardess typist, civil service	3*3	352.878
teacher aide	3*3 3*2	203.588 0 99.368
teacher arde	JZ	099.308
MODERATE	•	
accountant, certified public	5*8	160.188
counselor, private employment agency	5*7	045.10 8
counselor, vocational rehabilitation	5*7	0 45.108
interior designer and decorator	5*7	142.051
pharmacist	5*7	074.181
teacher, adult education	5*7	099.228
dietician	4*7	077.168
instructor, vocational training	4*7	097.228
telephone installer	4*7	822.381
radiologic technologist	4*6	078.368
salesman, real estate	4*6	250.358
secretary (general office)	4*6	201.368
shoe repairman	3*7	365.381
fire fighter	3*6	373.884
policeman	3*4	375.268
automobile service station attendant	3*3	915.867
janitor	3*3	382.884
waiter-waitress	3*3	311.378
usher	3*3	344. 878

Job Titles	SKILL Code	DOT num.
newspaper publisher	6*8	132.018
salesman, securities	6*7	251.258
optometrist	5 *7	079.108

TABLE 16

SKILL Code	DOT num.
4*7	633.281
4*5	280.3 58
3*5	913.463
	4*7 4*5

Job Titles	SKILL Code	DOT num.
lineman (telephone)	4*7	822.381
statistical machine serviceman	4 *7	633.281
bus driver	3*5	913.463
automobile seat cover and convertible		
top installer	3*4	780.884
screw machine operator (production)	2*3	604.885
bottler, brewery	2*2	920.885
lithographic press feeder	2*2	651.886
marker	2*2	920.8 87
battery assembler	1*2	727.887

Job Titles	SKILL Code	DOT num.
newspaper publisher	6*8	132.018
salesman, securities	6*7	251.258
accountant, certified public	5*8	160.188
claim adjuster	5*8	241.168
commercial artist	5*7	141.081
counselor, school	5*7	045.108
counselor, vocational rehabilitation	5*7	045.108
floral designer	5*7	142.081
interior designer and decorator	5*7	142.051
teacher, secondary school	5*7	091.228
teacher, elementary school	5*6	092.228
patternmaker, metal	4*8	600.280
elevator repairman	4*7	829.281
instructor, vocational school	4*7	097.228
maintenance man, factory or mill	4*7	899.281
occupational therapist	4*7	079.128
office machine serviceman	4 *7	633.281
photographer, commercial	4 *7	143.062
statistical machine serviceman	4*7	633.281
salesman, life insurance	4 *6	250.258
salesman, real estate	4 *6	250.358
salesperson, general hardware	4*6	276.358
glazier (glass installer)	3*7	865.781
receptionist	3*5	337.368

Job Titles	SKILL Code	DOT num.
Optometrist	5*7	079.108
Pharmacist	5*7	074.181
department head, supermarket	4*7	299.138
draftsman, architectural	4*7	001.281
electrical technician	4*7	003.183
engineer, stationary	4*7	950.782
statistical machine serviceman	4*7	633.281
telephone installer	4*7	822.381
bookkeeper I	4*6	210.388
digital computer operator	4*6	213.382
salesperson, shoe	4*6	263. 358
lithographic press plate maker	3*7	972.781
assembler (electrical equipment)	3*6	827.884
barber	3*5	330.371
telephone operator	3*3	235.862
cashier-checker	3*2	299. 468
teacher aide	3*2	099.368
assembler small parts	2*2	706.884
bottler, brewery	2*2	920.885
lithographic press feeder	2*2	
- • •	2*2	651.886 914.884
solderer, production line	4~4	814.8 84

Job Titles	SKILL Code	DOT num.
engineer, mechanical	6*8	007.081
newspaper publisher	6*8	132. 018
engineer, civil	5*8	005.081
engineer, time study	5*8	012.188
claim examiner	5*7	168.288
counselor, school	5*7	045.108
counselor, vocational rehabilitation	5*7	045.108
interior designer and decorator	5*7	142.051
dietician	4*7	077.168
instructor, vocational training	4*7	097.228
occupational therapist	4*7	079.128
statistical machine serviceman	4*7	633.281
•••••	4*6	250. 358
salesman, real estate	3*7	861.781
tile setter (ceramic) collector (bill collector)	3*4	240.368

APPENDIX B

THE KNOWLEDGE CHECK

THE KNOWLEDGE CHECK

Knowledge about Good Job Goals

These are questions we would like you to answer. Take your time, but not too long. You won't be graded so you don't have to worry about mistakes, but do your best. When you are finished, show this to your counselor who will take it from you.

- 1. Jobs have two things people should think about before they go to work. Circle the one that seems to have these two things.
 - a. co-workers and bosses
 - b. needs and rewards
 - c. rewards and skill demands
 - d. tasks and duties
- 2. From these statements, pick out the one that seems most like a need someone might have about work.
 - a. a need for exercise
 - b. a need to feel useful
 - c. a need for love
 - d. a need for leisure time
- 3. A worker's needs can be met by: (circle one)
 - a. having good things to do after work
 - b. not making the boss angry
 - c. getting along with co-workers
 - d. getting the right rewards from the job
 - e. being a good worker
- 4. For most of your life, you have tried to gain skills so you would be a good worker. You should also think about: (circle one)
 - a. spending time with your family
 - b. getting enough education
 - c. having good connections
 - d. knowing what needs work should satisfy for you.

go on to next page

5.	It's important to have job goals after you begin looking for work
	a. true b. false
6.	Give at least one example besides money of something that people may want to get out of work.
7.	What else should people think about besides skills when they start making job goals?
9.	People should set job goals: (circle one)
	 a. to find a job that pays enough b. to save a lot of time c. to avoid getting a job they don't like d. so they can get the right kind of training
9.	Your needs as a worker can be met off the job to make up for your needs not being met on the job
	a. true b. false
10.	Your as a worker have to match the demands of the job.

Scoring for the Knowledge Check

A score of one is assigned for each correct response as follows:

Item 1: c

Item 2: b

Item 3: d

Item 4: d

Item 5: b

Item 6: satisfaction of helping others, friends, etc.

Item 7: needs or skill demands or rewards

Item 8: c

Item 9: b

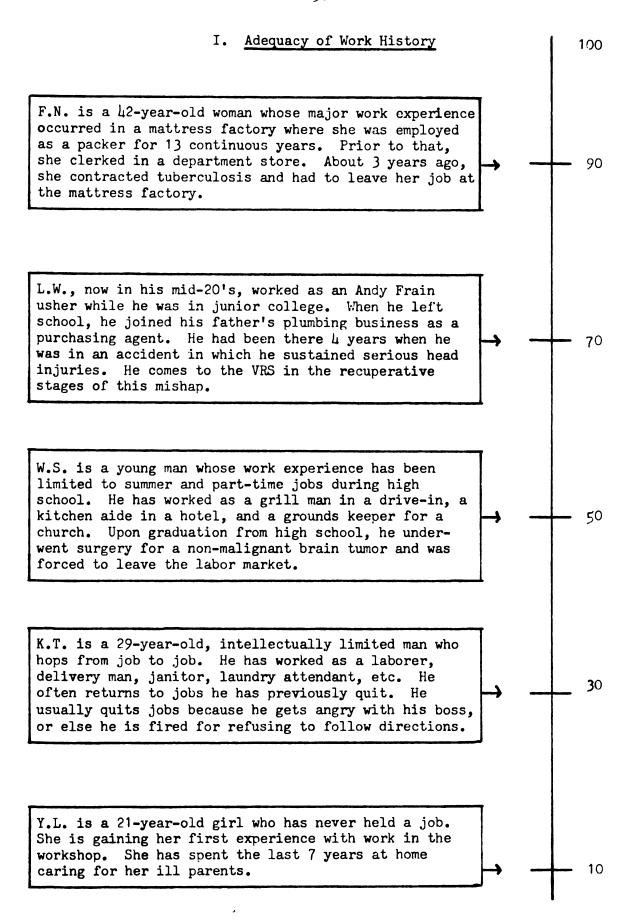
Item 10: skills

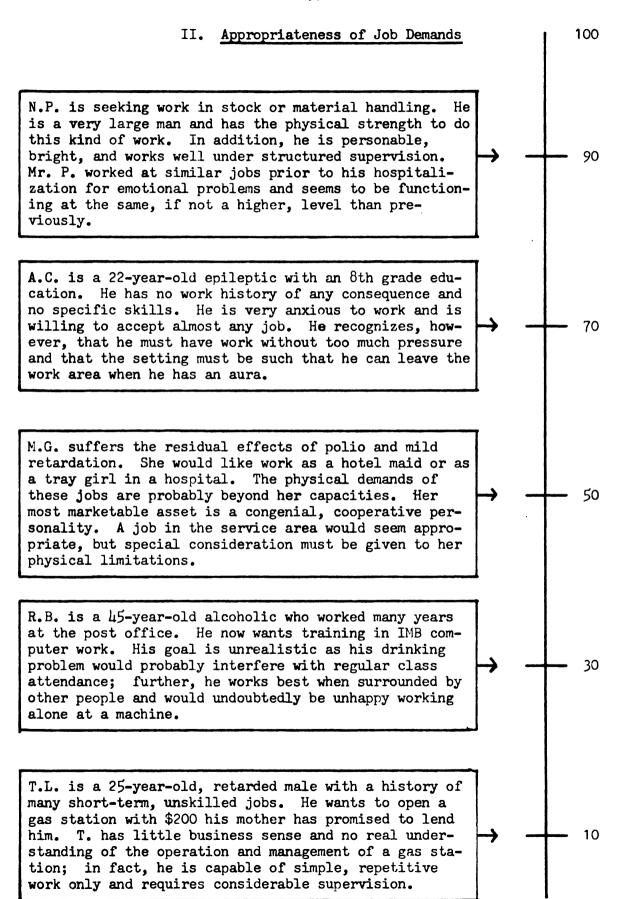
APPENDIX C

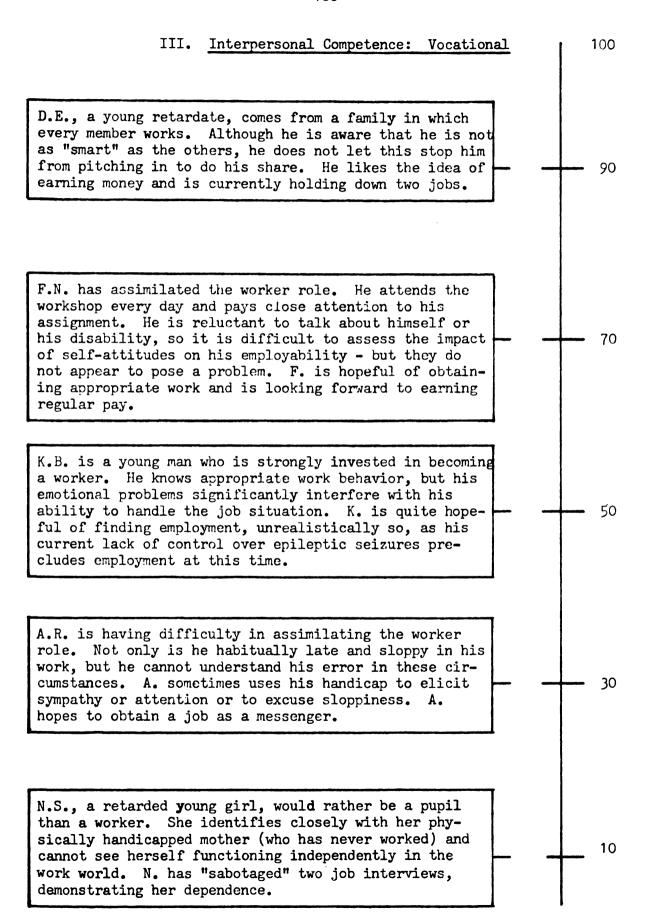
THE REVISED SCALE OF EMPLOYABILITY: COUNSELING

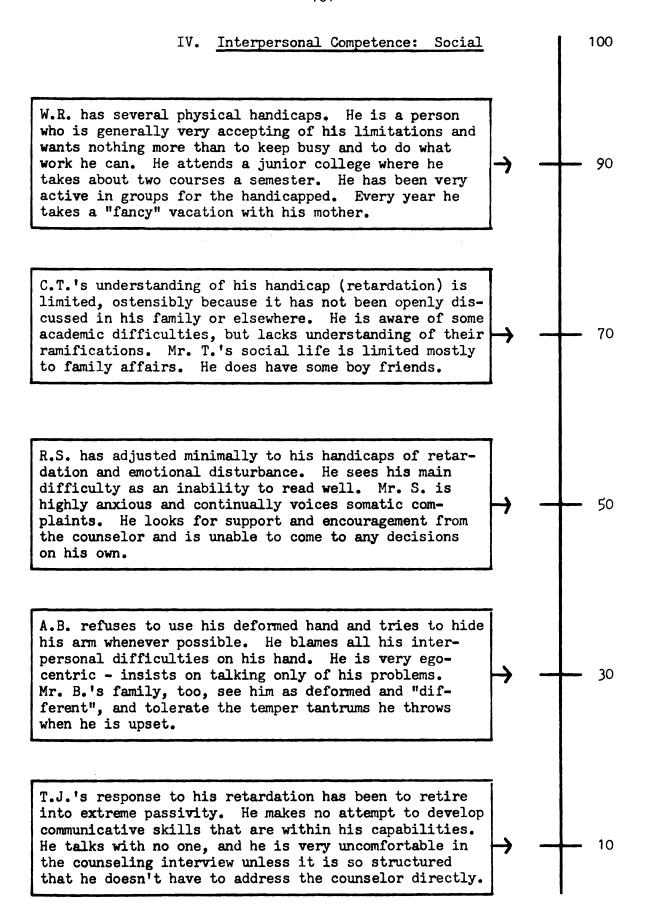
THE REVISED SCALE OF EMPLOYABILITY Counseling Scale

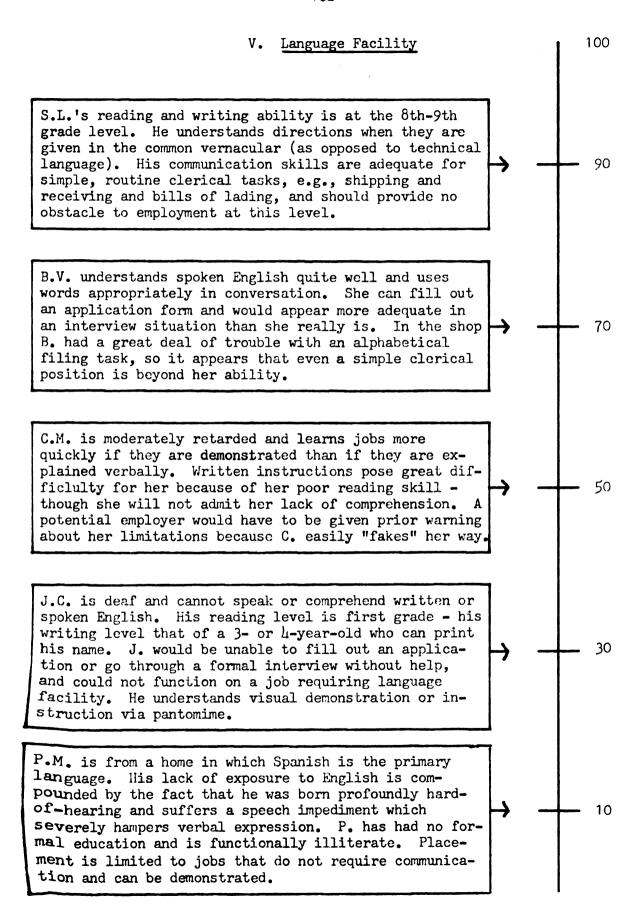
Brian Bolton
Chicago Jewish Vocational Services

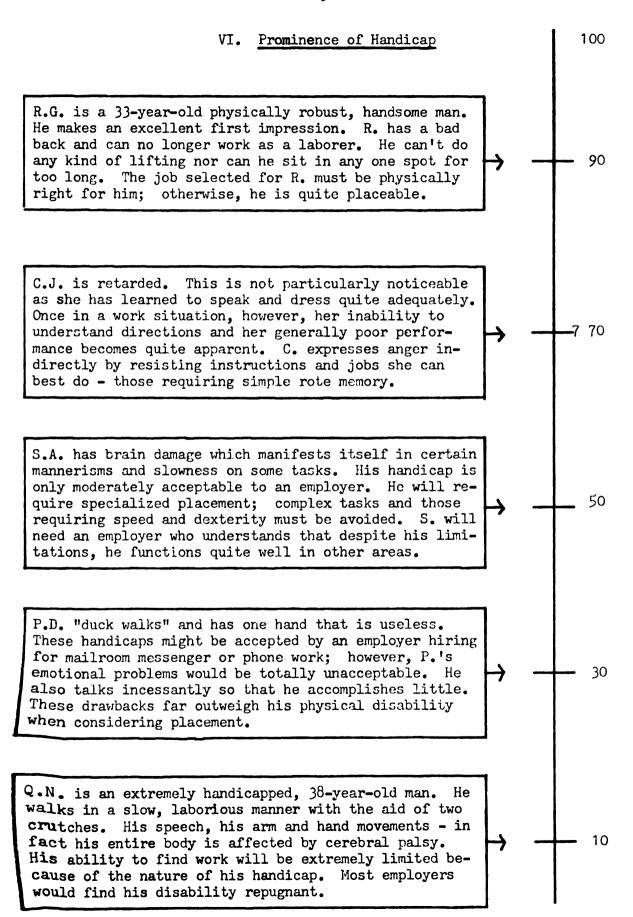












Scoring for the Revised Scale of Employability

Each scale is separately scored according to the thermometer rating given by the counselor. Scale scores can range from zero to one hundred.

APPENDIX D

THE SERVICE OUTCOME MEASUREMENT FORM

RESEARCH REPORT FORM A

Counseld	Or Client		 	Date
1	State Agency Number	10.		Age Started Working
2	Case Number			Previous Agency Contact (1 Yes, 2 No)
3	Caseload Number			Marital Status (1 Married, 2 Widowed,
	Status			3 Divorced, 4 Separated, 5 Nev. Married)
5. :	Reason for Closure (Only if	13.		No. of Dependents
	Other than Status 26)	14.		Age at Disablement
6	Age			Primary Disability
7	Race (1 White, 2 Negro, 3 Indian,	16.	<u>-</u>	Secondary Disability
	4 Latin American, 5 Other)			No. of Other Documented Disabilities
	Sex (1 Male, 2 Female)	18.		Weekly Earnings (Dollars Only)
	Referral Source			
(*Use R-	-300 Codes, Oklahoma use R-105 Codes, Marylan	d use R	-13 Codes,	Utah use ORS-300 Codes)
I. DIFF	FICULTY ONLY			
A. A	Anticipated Change in Client's Level of Function	ing Duri	ing Service	s
_	1. Alleviate			-
	2. Improve Greatly			
	3. Improve Somewhat			
	4. Remain the Same			
	5. Deteriorate			
B. E	imployment Prognosis			
-				
	1. Presently employed in competitive to			
	2. Employable at former job or another			
-	3. Vocational training required; client h		ling potent	101
	4. Limited vocational training potential5. No vocotional training potential	•		
_	3. No vocononal training potential			
C. E	mployment History; To An Employer, the Client	s Past	Nork Histor	ry Would:
	1. Make a very favorable impression			
	2. Make a favorable impression			
	3. Seems adequate			
	4. Seems inadequate, but acceptable wi	ith rese	vations	
-	5. Extremely bad employment history			
D. <u>A</u>	Availability of Facilities and Client's Attitude To	oward T	emporary R	Relocation (Minimum of three weeks)
_	1. All necessary facilities are availabl	e or cli	ent looks fo	orward to temporary relocation
_	2. Client accepts temporary relocation	and adj	ustment pro	oblems will be relatively few or will not be
	severe or client resists using availa	ble faci	lities	
_	3. Client accepts temporary relocation	but may	have diffic	culty adjusting to his new surroundings
_	4. Client is reluctant to relocate even t	tempora	ily and ma	y encounter severe adjustment problems
_	5. Client strongly opposed to temporary			
	chances for success			

	E.	Availability of Transportation
		 Client has easy access to an automobile or inexpensive public transportation Client must be driven by family, friends, or use taxi, which are available Client must be driven by family, friends, or use taxi, but these resources are not readily available Many special considerations must be made by the counselor to provide transportation Client is homebound or must remain in a hospital or institution
11.	ED	DUCATION
		Years of Academic Schooling
		Months of Trade or Vocational School
		Months of O.J.T.
	D.	Months of Adjustment Training
HI.	. <u>E</u>	CONOMIC/VOCATIONAL STATUS
	A.	Vocational Level
		1. Professional, Technical and Managerial
		2. Licensed or certified trades and crafts, or other highly skilled work
		3. Semi-skilled and clerical
		4. Unskilled5. Disability status precludes employment
		3. Disability states precious employment
	В.	Weekly Earnings
		1. \$100.01 per week and above
		2. \$70.01 per week to \$100.00
		3. \$50.01 per week to \$70.00
		4. \$10.01 per week to \$50.00
		5. \$10.00 per week and below
	C.	Work Status
		1. Wage or salaried worker (competitive labor market) or self-employed (except BEP)
		2. Wage or salaried worker (sheltered workshop), state agency managed business enterprise (BEP)
		3. Homemaker, unpaid family worker, not working student
		4. Trainee or worker (non-competitive labor market)5. Not working other
	D.	Primary Source of Support
		1. Own Earnings
		2. Dividends, Interest, Rent, and Savings
		3. Family and friends, or non-disability insurance (Retirement, Survivors, Annuity, etc.) 4. Disability and Sickness Insurance (SSDI, Workmen's Compensation, Civil Service, etc.)
		5. Public Assistance, Private Relief, or Resident of Public Institution
	E.	Dependency of Client on Others for Financial Support
		1. Completely independent
		2. Approximately 25% of income comes from sources other than earnings
		3. Approximately 50% of income comes from sources other than earnings
		4. Approximately 75% of income comes from sources other than earnings
		5. Totally dependent on sources other than earnings

IV. PHYSICAL FUNCTIONING

Ą	. General Hea	olth Status Other Than Disability
	1.	Feels good most of the time; has feelings of vitality
		Generally feels good, but reports minor problems that seem reasonable
		Multiple complaints, which seem mostly reasonable
		Multiple complaints that seem mostly unjustified by physical condition
	5.	Multiple complaints that seem totally unjustified by his physical condition
В	. Mobility	
	<u>1</u> .	Totally independent
	_	Ambulatory, but somewhat restricted or with minimal use of devices
		Ambulatory with major devices, as unassisted wheelchair
	4.	Ambulatory only with assistance of another person, as assisted wheelchair
	5.	Bedridden
C	. Physical Inc	dependence for Tasks Other than Mobility
		Totally independent
		Minimal assistance required
		Dependent for one major or several minor tasks
		Dependent for several major tasks
	5.	Constant need for attendant services
D	. Work Tolera	nce
	1.	Minimal restrictions to type of work client can do
	2.	Occupations limited to light physical activity but able to work full-time
	3.	Sedentary work, low stress, or close supervision required; but able to work full-time
	4 .	Unable to work full-time because of mental or physical condition
	5.	Current disability status precludes employment
E	. Prominence	of Vocationally Handicapping Condition (Including Mental and Emotional)
	Handicap is	;
		Hidden and cannot be directly observed
	<u> </u>	Hidden and would only be observed episodically
	3.	Noticeable only after a period of interviewing, or only slightly noticeable
	 4.	Marked and obvious, noticeable at once and continually manifest
	5.	Marked, obvious, and continually manifest and will be repugnant to most employers
F	. Compensato	ry Skills
	1.	Has developed in other skill areas or with the use of devices, almost total compensation for disabilit
		Has significant development in other skill areas, or with the use of devices, abilities which help
		compensate for disability
		No real development in other skill areas and minimal use of devices
		Some deterioration in other skill creas
	5.	Substantial deterioration in other skill areas
Δ	DJUSTMENT	TO DISABILITY
A	. Identification	n with Worker Role
).	Client feels personal need to be independent, and do his share
	2	Identity to worker role developing or deteriorated somewhat since disability but wants to work
	3.	Weak identity to worker role, little idea of day-to-day work demands
	4.	Client has adjusted to being dependent; talks of working but is unconvincing
	`. . 5.	Client strongly identifies with handicap and cliens to dependent rale

	В.	Compatibilit	y of Employment Expectations with Client's Personality and Physical Condition
		2.	Client seems ideally suited for the work he desires Client's employment expectations are reasonable, although not ideal Client has no ideas concerning possible vocational goals, or his ideas are more "day dreams" then
			employment expectations Client's employment expectations are very unrealistic and impractical
		5.	Client's employment expectations are so totally unrealistic and impractical, counselor must work with other professional persons, agencies, or institutions before client can proceed in the rehabilitation process
	C.	Client's Con	ofidence in Himself as a Worker
		2.	Highly favorable, client's self-confidence inspires confidence from others Client believes he can and will be a good employee in spite of his handicap Client feels he will become a fairly good employee but exhibits little initiative
		4.	Client excessively timid or shows unimpressive over-confidence
		5.	Client can never see himself as being able to hold a job
VI.	<u>sc</u>	CIAL COMP	ETENCY
	A.	Language F	ocility
			Reads and writes well; has no trouble understanding and communicating common vernacular and could learn to use technical language
		2.	Reads, speaks, and writes adequately; has no particular problem filling out employment applications, or holding job interview
			Reads, speaks, and writes adequately for job applications and interview, but speaks slowly and may have some difficulty with other than simple written instructions
		4.	Reads, speaks and/or writes poorly, and will have difficulty interpreting even simple written instruc- tions
		5.	Almost complete lack of language, functionally illiterate, extremely small vocabulary
	B.	Decision-Mo	king Ability .
			Takes strong active role in decision making
			Slow to make decisions but makes his own decisions
			Wonts others to make decisions but will take some part in decision-making process Others make decisions for him and manage his personal offairs
			Will neither help make decisions nor take action on help from others; counselor must work with other professional agencies, persons, or institutions before client can proceed in the rehabilitation process
	C.	Role in Fam	il <u>y</u>
			Assumes appropriate role
			Assumes appropriate role but some counselor reservation
			Porticipates in familial affairs but evidence of underlying ambivalence toward family Refuses to assume appropriate role
			Conscious effort to disrupt family
	D.	Family Supp	ort
			Good; family shows great deal of understanding of client; very supportive and helpful
			Moderate; although not ideal, support is adequate Fair; support given but is inappropriate; evidence of underlying ambivalence on the part of the family
			Poor; support given but there is definite indifference on the part of the family toward client or his rehabilitation
		5.	Very poor; family definitely non-supportive, strong opposition

Scoring for Service Outcome Measurement Form

The items were assigned scores inversely to the sequence the foils are numbered for each item. A rating of one is scored five, two is scored four, and so on.

APPENDIX E

THE STRUCTURED INTERVIEW
including
REHABILITATION GAIN SCALE ITEMS

THE STRUCTURED INTERVIEW

Interviewer:
Client: Proposed date and time for interview: Actual date:
Introductory Statement:
Several weeks ago your counselor from Vocational Rehabilitation
Services,, asked you to participate in a re-
search study conducted by Michigan State University's Rehabilitation
Counseling Program. Since you have volunteered, we would now like to
have a few minutes of your time to ask some questions of you. We want
you to know that all information you give to us will be kept confiden-
tial. Even your counselor will not see your answers. When these
results are reported, your name as a volunteer in the research project
will not be revealed.
1. Do you have a job at this time? If so, what is it?
If client responds "no", go to question #11 If client responds "yes", continue with question #2
2. How long have you had this job?
3. How many hours per week do you work, including the time it takes you to go to and from your work?
4. List all the employers that you contacted before you were able to get this job.

5•	What was the job goal you agreed on with your rehabilitation counselor,?
6.	Would you say your job matches your job goal
	(1) not at all(2) somewhat(3) very well
	If it doesn't match your job goal (response 1 or 2) can you say where you can find a job that would match your job goal?
7.	How long do you expect to stay on this job?
	Ask clients if we might send them a questionnaire about their job. We will pay postage. It should only require a few minutes of their time. Yes No
8.	Are you looking for other jobs at this time? Yes No If so, why are you?
9.	If you have talked to anybody else about your job goal, please tell me who they are:
10.	If you get the job you want, how much money will you be making to start?(per week)
	Skip the following questions and begin at question #16
11.	What was your job goal which you made with?
12.	If you have talked to anybody else about your job goal, can you tell me their names and who they represent?
13.	Where will you find a job that matches your job goal?
14.	Who are some employers that you recently contacted for a job and for what job did you contact each of them?
15.	If you get the job you want, how much money will you be making to start?(per week)
16.	What kind of training do you need to be able to do the job that is your goal?

- 17. Where can you get the necessary training?
- 18. How long does the training take?
- 19. What are some needs you might have that you hope can be met by working?
- 20. What do you feel must be taken into consideration if a person is to be a good and satisfied worker? (note the client's response)
- 21. It's important for people to have the necessary skills for the jobs they want. What other things should you consider about yourself besides your skills? (note the client's response)
- 22. Which of the following statements describes your feeling about the vocational counseling you received from your rehabilitation counselor?
 - 3 very satisfactory
 2 adequate
 1 not satisfactory

 - 0 not relevant to you
- 23. Which of the following statements describes your feelings about the vocational goal you have as a result of vocational counseling?
 - 3 The discussions I had with my counselor really made me think about my future.
 - 2 The discussions with my counselor were helpful but I don't think it made a difference in my ideas.
 - 1 The discussions really didn't mean that much to me.
 - O This question doesn't apply to me.
- Which of the following statements describes what you have done as a result of vocational counseling you received from your counselor?
 - 3 I tried to find out more about the jobs we talked about. 2 I haven't really done much but I'm thinking about it.

 - 7 Really nothing at all.
 - O This question isn't relevant to me.

Thank you for your help so far. We have been asking some specific things about what you have done as a result of your experience with Vocational Rehabilitation Services. Now we would like to ask a few more questions about you in general.

*25.	How is your general physical health? Aside from any disability that you might have, how would you describe your physical health?
	5 excellent 4 good 3 fair 2 poor 1 don't know
*26.	How is your general mental health or emotional adjustment?
	5 excellent <u>μ</u> good <u>3</u> fair <u>2</u> poor <u>1</u> don't know
*27 .	If the work you prefer were available, what would be your chances of getting such a job?
	5 almost certain 1 very good 3 50-50 2 not so good very little chance
* 28.	We realize you do not know exactly what you will be doing in the future; however, which of the following do you feel you will be most likely doing one year from now?
	5 Employed full-time Lamployed part-time Self-employed Training or schooling Unemployed
+29.	How much time per week do you spend by yourself in leisure time or other constructive activities besides work?
+30.	How much time per week do you spend with other members of your family?
+31.	How many groups, clubs, and organizations do you belong to?
*32 .	What is the main source of support for you and your family?
	6 Your earnings 5 Earnings of someone else in family 1 Other insurance or pension payments 3 SSDI Benefits 2 Welfare payments 1 Other
+33.	Your current weekly earnings are \$ (nearest \$)
	Your weekly earnings before coming to Rehabilitation Services were \$ (nearest \$)
* den	otes items taken directly from Rehabilitation Gain Scale

^{*}denotes items adapted from Rehabilitation Gain Scale

Scoring for The Structured Interview

```
Item
 1: Yes = 1, No = 2
 2: Number of weeks working
3: Number of hours per week
4: Number of employer contacts (scored only if job obtained after
    treatment)
 5: Correspondence with original goal = 3
    No correspondence
    No job goal indentified
                                    = 1
6a: Scored as noted
b: Client knows where to find job goal = 2
    Client does not know
7: Two years or more
                                                = 4
    More than one year but less than two
    Less than one year but more than six months = 2
     Less than six months
8a: Yes = 1, No = 2
b: Not scored
c: Number of employers contacted
9: Number of other persons contacted
10: Correct figure = 2
    Incorrect figure = 1
          (validated by current Occupational Outlook Handbook)
11: Same as item #5
12: Same as item #9
13. Same as item #6b
14. Same as item #4
15. Same as item #10
    Correct training information = 2
     Incorrect or no information = 1
17. Correct information
```

Incorrect or no information = 1

18: Correct information Incorrect information = 1 (Items 16, 17, 18 validated by current Occupational Outlook Handbook) 19: Needs based on Theory of Work Adjustment concepts = 3 Needs partially based Needs not related = 1 20: Four concepts including needs, skills, rewards, skill demands = 5 Three concepts Two concepts = 3 One concept Other concepts 21: Statement of Needs = 3 Examples of Needs = 2Needs not mentioned = 1Items 22-28 scored as noted on the interview schedule 29: Hours spend in leisure time alone 30: Hours spent with family 31. Total number of groups, clubs and organizations

32: Scored as noted on schedule

33: Prior earnings deducted from current earnings

APPENDIX F

STUDIES IN CONTINUING EDUCATION FOR REHABILITATION COUNSELORS COUNSELOR QUESTIONNAIRE

Items 33 to 41 added especially for this current research

University of Iowa SCERC COUNSELOR QUESTIONNAIRE (Confidential)

General Information

1.	Name	2. Date
3.	District Office	State
4.	Age 5. Mari	tal Status:
		Single Separated or Divorced Married Widowed
6.	Sex: Male Female	
7.	Father's Occupation: 8. Fath	er's Education:
	Professional or Managerial Skilled Semiskilled Unskilled	Grade School Some High School Completed High School Some College Completed College Post Graduate
	Educational Informa	tion
9.	Educational Level You Achieved: (check)	
	Completed High School Some College Completed College Some Post Graduate M.A. Ph.D./Ed.D.	M.A. Plus
10.	Date first degree granted	
11.	Date last degree granted	

12.	Undergraduate major
13.	Major field in Graduate School
14.	What was your undergraduate grade point average (based on a 4-point scale)?
15.	What formal training have you taken in the past calendar year?
	1. class work in a local college or university 2. workshops or institutes 3. correspondence course work 4. formal training 5. other (specify)
16.	In being promoted (or getting a pay increase) in your agency, how would you rank the following items ("1" equals most important, etc.)
	Being in the right place at the right time Conforming and playing politics Engaging in further training Producing 26-closures Having an M.A. degree in Rehabilitation Counseling
17.	The following describes the extent to which the total current in- service training program helps me in performing my job:
	1. Rarely 2. Sometimes 3. Frequently 4. Generally 5. Almost Always
18.	For each activity listed below, circle a letter to indicate how well your previous training, from different sources, has helped you in performing that activity:
	A - Not Helpful B - Of Very Limited Help C - Usually Helpful D - Very Helpful E - Have Had No Training/Experience In This
from	ning taken Training taken a college from an agency Experience person person on-the-job
	BCDE ABCDE ABCD 1. Finding a specific job for a client.
A	BCDE ABCDE ABCD 2. Dealing in face-to-face contacts with client's emotions.
A	BCDE ABCDE ABCD 3. Using test results to guide a client.

A B	C	D	E	A	В	C	D	E	A	В	С	D	4.	Using medical reports to guide a client.
A B	C	D	E	A	В	С	D	E	A	В	С	D	5.	Dealing in face-to- face contacts with client unrealism in job choice(s).
A B	С	D	E	A	В	С	D	E	A	В	С	D	6.	Being able to formu- late a plan from client information.
A B	С	D	E	A	В	C	D	E	A	В	С	D	7.	Being able to handle personal problems and prejudices in work situations.
A B	С	D	E	A	В	C	D	E	A	В	С	D	8.	Using psychological reports to guide clients.
A B	С	D	E	A	В	С	D	E	A	В	С	D	9•	Reading and under- standing research reports.
A B	С	D	E	A	В	С	D	E	A	В	С	D	10.	Maintaining pro- ductive contact with referral sources and other professionals.

19. How many books, which you use on your job, do you have in your personal library?

Employment Information

20.	Years of experience in all types of counseling or personal work
21.	Years of experience as a rehabilitation counselor or worker
22.	Years of experience as a rehabilitation counselor in this agency
23.	In an ordinary work month, as part of your job, how many miles do you drive?
24.	Taking your total weekly working hours into account, please rank the following activities according to the amount of time you spend on each. (Give that activity taking the most of your time a rank of 1 and the last a rank of 4, etc.)

___ 1. Face-to-face contacts with clients

	community work
	3. Contacting other professionals (social workers, etc.) 4. Recording, administrative meetings, etc.
25.	On the average, how many hours each month do you put into in- service training activities?
26.	To what extent does your supervisor help you with job-related problems?
	1. Rarely 2. Sometimes 3. Frequently 4. Generally 5. Almost Always
27.	Which professional meetings did you attend during the last year? (Check those which apply.)
	None APA APGA ARCA NRA NRCA NASW Other (specify)
	State
	Regional
	National
28.	In which professional groups have you held office ?
29.	What professional journals do you read?
	I thoroughly read
	I casually read
30.	All things considered, which of these statements comes nearest to expressing the way you feel about your job?
	I like it I am indifferent to it I dislike it
31.	How much of the time do you feel satisfied with your job?
	All of the time Most of the time A good deal of the time About half the time Occasionally Seldom Never

32.	Which of the following reflects how often you use the Dictionary of Occupational Titles in giving occupational information to clients?
	Never Seldom With about half your clients Frequently With almost all your clients
33.	About how often do you refer clients to specific employers that have hired your clients in the past?
34.	What percentage of your caseload place themselves without your intervention?
35.	What is the classification of the caseload which you handle?
36.	What is the size of the caseload which you handle?
37.	What sources of occupational information do you use with your clients? List them:
38.	List some of the community employment agencies or resources that you frequently use:
39•	Which, if any, of the following placement techniques have you received training in or utilize?
	Vocational Exploration Group Minnesota Job-Seeking Skills Preparations Minnesota Theory of Work Adjustment Job Coaching Singer Survival Kit Other (what)

40.	basis?
	Minnesota Importance Questionnaire Strong Vocational Interest Blank Kuder Occupational Interest Survey Minnesota Vocational Interest Inventory GATB Other (what)
41.	If you have a placement specialist, what percentage of your clients do you refer to the specialist?

APPENDIX G

COUNSELOR EVALUATION FORM

COUNSELOR EVALUATION FORM

Please complete the following items by checking the appropriate column.

		definitely	somewhat	hardly at all
1.	Clients seemed to have a better understanding of the need for vocational counseling after they completed the Unit than those clients not exposed to the Unit.			
2.	Clients were able to integrate the materials of the Unit to the rehabilitation program you developed with them.			
3.	You enjoyed doing the Unit with your clients more so than other vocational counseling tools.			
и.	You, as a counselor, were able to make use of the results of the Unit in your counseling with the clients, more so than with other vocational counseling tools you use.			
5.	The Learning Unit has the potential to speed up the rehabilitation process more so than other vocational counseling tools.			
6.	You were able to integrate the Learning Unit into regular procedures without undue interruption. (Evaluate only the Unit and not the forms used for research purposes.)			
7.	You would recommend the Learning			

Unit to other counselors.
8. You would continue to use the

Learning Unit:
Yes ___ No ___

9. If you have any comments, suggestions, criticisms, or recommendations regarding the Learning Unit, please feel free to make them here.

APPENDIX H

MEANS AND STANDARD DEVIATIONS
DEPENDENT VARIABLES

Table H.1

Means and Standard Deviations, Dependent Variables

				Loc	Location	~			Š	Trea	Treatment	
Variable	Σ	SD	Σ	SD	Σ	SD	Σ	SD	Σ	M SD	W W	SD
			Scal	Scale of Employability	nploya	bility						
Work History Adequacy	68.3	22.7	0.79	17.5	68.5	25.9	72 . 4	23.0	6•\$9	24.8	70•5	18.2
Appropriate Job Goal	81.5	19.6	77°h	19.5	63.9	29.9	80.0	19.9	80.0	22.3	73.0	22.5
Interpersonal Competency - Vocational	81.2	17.5	64.5	19.0	68.8	24.2	85°h	13.4	77.9	19.5	71.2	20.0
Interpersonal Competency - Social	9008	15.3	77.2	15.7	77.9	22.2	79.3	18.9	81.6	17.2	76.2	17.1
Language Facility	91.7	9•3	82.1	14.1	1°98	15.3	91.9	10.0	88.8	10.8	87.2	14.2
Prominance of Handicap	81.3	13.0	84.4 15.2	15,2	17.9	24.9	79.2	18.1	81.3	18.5	80•6	16.0
			Str	Structured Interview	Inte	rview						
Obtaining Job (item 1)	1.2	7°	1.0	0	1. 0	0	1.0	0	1.0	•2	1.	٣.
Employers Contacted (items $\mu_{m{\jmath}}$ 1 μ)	1.6	2.1	1.2	1.9	1.3	2.0	2.5	2.7	1,3	2.1	2.0	2.2
Others Contacted (items 9, 12)	1.2	2.0	6°	1.1	1.2	1.4	1.1	6.	1.3	1.7	6.	1.2
<pre>Knowledge of Income of Job Goal (items 10, 15)</pre>	1.7	₹,	1.7	νů	1.3	ν. Λ	1.4	٢.	1.6	r.	1.5	9•

Table H.1 (cont'd.)

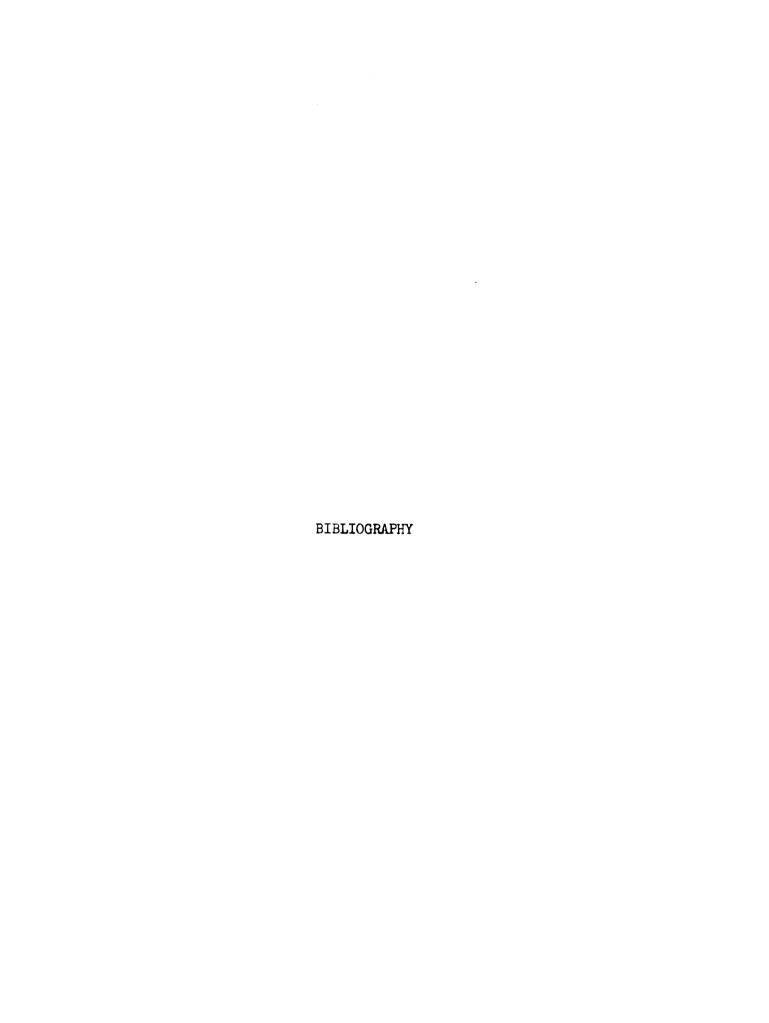
				1	Location		}		j	Treatment	ment	
Variable	Σ	SD	W W	SD	~ ¥	SD	η W	SD	Control M SI	SD	EXP	SD
Knowledge of Job Goal Location (1tem 13)	1.6	γ	1.7	ν. Γ	. کر	Ň	1.6	ъ́	1.6	Ň	1.6	, ,
<pre>Knowledge of Training Needed (item 16)</pre>	1.6	Ň	1.9	7.	1.7	μ	9.	7.	1.7	Ň	1.8	7.
Knowledge of Where Training Obtained (item 17)	7.	,	1.9	7.	1.6	٠ ا	1 8	7.	1.7	Ň	1.7	, N
<pre>Knowledge of Length of Training (item 18)</pre>	٦ ° ٢	ř	1.8	η.	1.7	ř.	. ک	ν.	1.7	Ň	1.6	٠ بر
Job Goal Agreement with Counselor (items 5, 11)	5.6	2.	2•h	ထိ	2.2	٠ <u>.</u>	2.7	ιζ	2.4	φ.	2.6	9.
Work Adjustment Concept of Needs (item 21)	1 8	Ň	1.7	٠ .	2,1	ထ္	1.9	r.	1.7	٠.	2.0	, N
<pre>Knowledge of Work Adjustment Concepts (item 20)</pre>	1.9	Ň	2,3	9.	2.2	9.	2,3	9.	2.1	9.	2.2	9.
Personal Needs as per Work Adjustment Theory (item 19)	1•3	$\vec{\mathcal{N}}$	1.4	ν,	7.	Φ.	7.		1.2	ň	1.6	9.
Satisfaction with Vocational Counseling (item 22)	2•3	2.	2.1	1.1	2.5	6.	2.6	π	2.14	ω .	2.3	6.
Satisfaction with Vocational Goal (item 23)	2.2	ω	1.9	1.3	2.5	-7	2.3	6.	2•3	6	2.1	1.1

Table H.1 (cont'd.)

					Location					Trea	Treatment	
Variable	Ψ	SD	X	2 SD	Σ	3 SD	V	SD	u O ∑ ∑	Control M SD	Exp.	s. SD
Client Response to Vocational Counseling (item 24)	2.2	6.	2.1	-	2.7	· 7	2.7	9•	2•4	.7	2.4	1.0
	Gain	n Scale	e Items	ij	the Str	Structured		Interview				
Client Rating of Physical Health (item 25)	4.1	8	4.1	1.0	3.7	6•	η•0	1.2	3.7	1.0	4.3	8.
Client Rating of Mental Health (item 26)	4.1	1.1	3.8	1.4	4.3	9.	7.0	1.3	4.1	1.1	7.0	1.2
Client Anticipation of Obtaining Job Goal (item 27)	3.4	-	3.5	1. 1.	2.8	1.4	3.6	1.6	3.8		3.0	7.
Client Projection of Employment Status (item 28)	3.8	1.3	3.1	1.4	3.9	1.3	3.9	1.3	3.8	1.3	3.6	1.3
Amount of Leisure Time Alone (item 29)	24.6	29.9	13.0	16.0	21.3	9.3	27.9	18.3	20.5	16.5	22.5	26.0
Time with Family (item 30)	18.9	12.h	43.9	34.6	22.3	16.3	38.2	36.3	30.4	28.0	29.8	27.9
Club, Group Membership (item 31)	జ	6.	9•	1.1	.7	6.	· •	.7	ω•	1.0	, N	2.
Level of Financial Independence (item 32)	4.7	1.	4.3	1.6	4.4	1.6	2•1	0.	3.8	1.7	4.3	1.6
Client Income Increase (item 33)	23.7	30.9	4.3	13.2	30.8	51.6	23.5	27.7	17.0	32.0	22.7	34.0

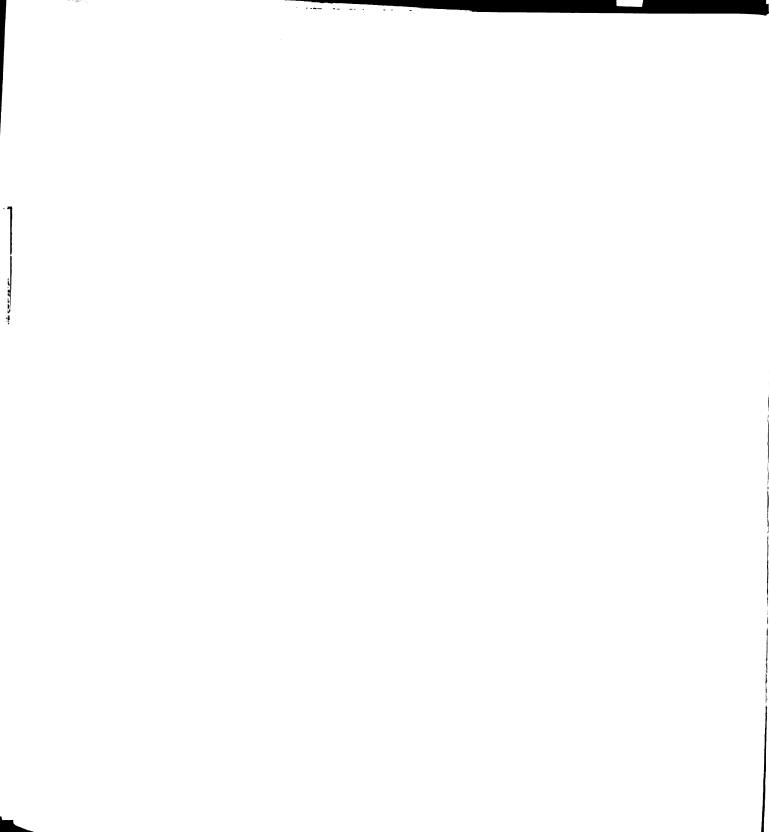
Table H.1 (cont'd.)

				Loca	Location					Trea	Treatment	
Variable	Σ.	SD	2 M	SD	Σ	3 SD	W	SD	Cont	Control M SD	т М	SD
		Ser	Service Outcome Measurement	ıtcome	Measu	rement	Form					
Client Case Difficulty Subscale	3.7	η•	3.5	7.	3.4	.7	3.6	7,	3.5	7	3.6	9•
Economic/Vocational Status Subscale	2.6		2.0		2.1	1.0	2.0	9.	2.2	1.0	2.3	1.1
Physical Functioning Subscale	4.3	, L	4.3	7.	4.1	Ň	7.7	Ň	4.3	9.	4.3	7.
Adjustment to Disability Subscale	14.1	٠.	3.4	٥	7.0	1.0	4.3	ထ္	η•0	φ	η•0	φ.
Social Competency Subscale	4.4	ਮੰ	3.8	8	4.1	·•	7.0	Φ.	4.2	Φ.	4.0	2.
Total SOMF Score	ó8 . 4	9.3	62.1	8.3	63.7	12.0	64,9	7.4	65.4	8.3	8.49	10.6
				Other Variables	/ariab	les						
Initial Status	5.5	1.8	3.0	2.3	2.6	1.7	3.5	2.5	7.0	2.4	3°8	2.4
Status Change	• 5	2.	η.	1.1	7.	2.2	ŗ.	6.	ν,	1.0	9.	7,
Knowledge Check	9•9	2.4	6.8	1.7	5.4	1.9	7.2	1.	5.5	1.5	7.5	1.9



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