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The Use and Transferability of Systematic Human Relations Training in a Paraprofessional Associate Degree Program

Terrance Albert Hagan
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THE USE AND TRANSFERABILITY
OF SYSTEMATIC HUMAN RELATIONS TRAINING
IN A PARAPROFESSIONAL
ASSOCIATE DEGREE PROGRAM

by
Terrance Albert Hagan

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment
of the
Degree of Doctor of Education

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Terrance Albert Hagan

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CHAPTER I

INTRODUCTION

Paraprofessionals are working in the field of mental health in an increasing number of positions and are filling ever more demanding roles (Gartner, 1971). As the number of individuals in our country who need and seek help increases, the demand for trained and skilled paraprofessionals is also increasing (Sobey, 1970). One of the ways colleges and universities across the country are attempting to meet this demand is through the development and delivery of two-year associate of arts degree programs designed to train paraprofessional mental health workers (Young, True, & Packard, 1974). Development of these programs, however, came before any experimental or quasi-experimental research could be designed evaluating effective means of training paraprofessional mental health workers within a two-year college based program (Hadley, True, & Kepes, 1970). Therefore, there are many unanswered questions related to effective and efficient training methods that could be used in associate of arts degree mental health programs.

Recently, counselor skills thought to be basic to an effective counseling relationship have been identified, operationally defined, and researched (Carkhuff, 1969a, 1
1969b, 1971; Carkhuff & Berenson, 1967; Rogers, 1957, 1967; Truax & Carkhuff, 1967). Building on this re-
search, Gazda, Walters, and Childers (1975) developed a step-by-step procedure for training in basic counseling
skills. The authors call this procedure systematic hu-
man relations training.

The effects of systematic human relations training on paraprofessional trainees and the transferability of the training and its effects to other trainees within one associate of arts degree mental health program were studied in the present investigation.

The Problem

Over the last 10 years, an extraordinary growth in college based paraprofessional training programs for men-
tal health workers has been observed (Young et al., 1974). The first associate of arts degree program began at Purdue University in 1966 (Hadley et al., 1970), and 16 people were granted associate of arts degrees from that univer-
sity in 1968 (Kepes, 1969). By 1974, there were 174 colleges in 44 states offering mental health or human services associate of arts degree programs, and an addi-
tional 37 colleges actively planning programs. By June, 1974, 11,000 paraprofessionals had graduated from these programs and the projected figure for 1976 is 20,000 asso-
ciate degree mental health workers (True & Young, 1974).
The demand and need for such training is apparent both from the nationwide growth of these programs and from the employment records of the graduates. Young et al. (1974) report that 72% of the graduates from associate of arts degree mental health programs were employed in mental health settings as of 1972, while 18% were continuing their formal education.

Unfortunately, research and evaluation have not kept pace with the enormous growth of the associate of arts degree programs in the field of mental health. In fact, experimental or quasi-experimental research directly related to effective skills training within associate degree mental health programs is virtually nonexistent. There are many questions concerning curriculum and training techniques that remain to be answered and there exists a wide diversity in course offerings and educational approaches.

Despite divergencies, three characteristics appear to be uniform across programs. These characteristics are introductory mental health courses, an overview of helping approaches, and specific skills training in counseling (True & Young, 1974).

Since the educational experience of the associate of arts degree mental health graduate is limited as compared to the traditional professional counselor, there is little opportunity for extensive theoretical learning in the
areas of personality theory or psychodynamics (True, 1974). The specific counseling skills taught in these programs are therefore limited to the basic facilitative counseling skills rather than the more advanced action counseling skills such as dealing with resistance or selection of appropriate intervention strategies (Gazda, Asbury, Balzer, Childers, Desselle, & Walters, 1973).

There are needs, then, for research dealing directly with training methods in the basic counseling and interviewing skills that can be effectively implemented in associate of arts degree mental health programs. In order for such research to be practical or usable, it must also address the need for associate degree mental health programs to be efficient, that is, to do as effective a job as possible with limited time and resources. When compared to professional counseling or psychology programs, associate degree mental health programs have very little time (two years) to prepare the students for the world of work. Additionally, there is a limitation in terms of professional staff. The average associate degree mental health program has 3.5 faculty members including the program director with an average of 55 students per program (Young et al., 1974).

Purpose of this Study

The purpose of this study was to investigate one
possible means of improving the delivery and effectiveness of human relations skills training within a paraprofessional associate of arts degree mental health aide training program. Additionally, goals of increased efficiency and specificity were studied within the framework of limited resources by using second year students as trainers of entering students in human relations skills, which is the core element of paraprofessional training in mental health work.

The Setting

The present study was conducted at Lake Superior State College, a fully accredited four-year college in Sault Sainte Marie, Michigan. Lake Superior State College introduced a two-year Associate of Arts degree program for mental health aides in 1974. A primary emphasis of the program is substance abuse counseling, although preparation as a generalist in the mental health field is stressed. There are two full-time faculty members on the staff of the program and the principal investigator in this study holds one of these appointments. There are approximately 80 students in the program, divided evenly between first and second year classes. These students approximate very closely the national norms for similar programs as reported by Young et al. (1974) in terms of
age, sex, and educational background. The program itself is also very much like similar programs around the country (Hadley et al., 1970; True et al., 1974; Wellner & Simon, 1969; Young et al., 1974) in terms of basic courses offered, field placement, and practicum experiences offered.

Significance for Education

The significance of this study for education lies in the area of skills training and counselor education. It is evident from a survey of the related literature that there is no clear direction to a preferred process of training paraprofessionals in basic human relations skills within a two-year associate of arts degree program. Although there are many approaches to human relations education presently used in such two-year programs, there is an apparent lack of research evidence to demonstrate the effectiveness of any of these approaches within associate of arts degree programs. Empirical evidence of the effectiveness, or noneffectiveness, of one approach to human relations skills training within a two-year associate of arts degree program would be an important addition to the literature on paraprofessional training programs.

If the hypotheses of this study are supported, persons involved in other paraprofessional training programs

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around the country might be interested in applying the procedures outlined in this study or studying a similar training model in their particular settings. If such applications support the findings of this study, perhaps a preferred process of training paraprofessionals in basic counseling (human relations) skills will be identified.

An efficient use of existing resources within two-year associate of arts degree programs would be identified if the transferability of training concept proves effective. A statement could then be made to program administrators, as well as instructors, within these training programs concerning the use of their students as training assets.

On the other hand, if the hypotheses of this study are not supported in whole or in part, the study would serve to limit the number of options in the search for better ways of teaching and training paraprofessionals. It would be an important contribution to the paraprofessional training literature to know that a training approach that is effective in some settings is not effective in a two-year associate of arts degree program.

The possible unique contribution of this study lies not only in the application of a well researched and designed training paradigm to an associate of arts degree program, but more importantly, in the integration of the
training model with the total curriculum of the program and the inclusion of students in some of the training responsibilities. The curriculum for the program under study is included in Appendix A, p. 87.

Definition of Terms

To aid in an understanding of terms used in this study, the following definitions will apply.

Human Relations Skills: the basic skills of empathy, respect, warmth, concreteness, and genuineness as defined by Gazda et al. (1973) in the book Human Relations Development: A Manual for Educators. For the purposes of this study, human relations skills will be considered synonymous and interchangeable with basic counseling skills.

Paraprofessional: a paid or unpaid person who works directly with individuals or community groups in providing mental health services to the public but who lacks professional (masters degree or more) mental health training (Sobey, 1970).

Transferability of Training: the ability of a trained student to teach newly acquired skills to another student through a systematic training approach. It is assumed that the student transferring the learning of newly acquired skills is a novice in the field of teaching and has had no previous experience as a trainer or teacher.

Discrimination Skills: the ability to identify the level of counselor responses along the 5 point global scale (Wolf, 1976) which ranges from destructive (level 1) to extremely helpful (level 5).

Responding Skills: the ability to respond in writing to client comment. This skill is rated on the 5 point global scale (Wolf, 1976) which ranges from destructive (level 1) to extremely helpful (level 5).

Training Model: a structured series of training procedures aimed at teaching the paraprofessional certain counseling skills.

Discussion of Selected Literature

Paraprofessional is a term that was not in common usage until the mid-1960's (Gartner, 1971). Its appearance on the mental health scene signified the acceptance by the mental health professions of a new career within the field. This acceptance was further evidenced when the American Personnel and Guidance Association (APGA,
1967) and the American Rehabilitation Counseling Association (ARCA, 1968) issued statements concerning the use of support personnel or paraprofessionals.

The acceptance of support personnel working in the area of mental health was precipitated, at least in part, by a severe shortage in the manpower needed to meet the ever increasing need for help with human problems. The community mental health concept of dealing with mental health problems in the communities rather than in large mental institutions was made a reality with the Community Mental Health Act of 1963. This development, along with the constant increase in human problems such as alcohol and drug abuse (Brecher, 1972; Chafetz, 1974), crime (Reid, 1976; Southerland, 1974), and broken families (Leslie, 1973; Shultz, 1976), have increased the need for helping persons to work in the delivery of the human services. Sobey (1970) points out that the supply of core professionals (psychiatrists, social workers, nurses, counselors, and psychologists) has simply not been able to keep up with the need for human services. Sobey calls this situation a manpower crisis in mental health. He points out that the only approach available to cope with this crisis is the use of support personnel (also called paraprofessionals, lay counselors, aides, assistants, or technicians) in the delivery of human services.
When this concept was first implemented in a formal way in the Department of Labor's project CAUSE (Counselor Assistant, University Summer Education), it met with both applause and attack from the professional practitioners in the field (Zimpfer, 1974). The project was discontinued after two years but the concept of using paraprofessionals with brief intensive training to meet the growing human service needs was deeply implanted and has been growing intensely for the last decade.

Functions of paraprofessionals

There exist two factions among the advocates of the use of paraprofessionals. One faction agrees with the APGA and ARCA statements on the use of support personnel, namely that paraprofessionals should perform only administrative or "nonprofessional" activities, thus freeing the professional to invest more time in activities such as therapy (Gust, 1968; Levinson & Schiller, 1966; Odgers, 1964; Patterson, 1965; Rosenbaum, 1966; Savino & Schlamp, 1968; Schlossberg, 1967). The other faction feels that paraprofessionals can add a new dimension to the delivery of human services and function successfully in a therapeutic capacity (Arnoff, Jenkins, & Spiesman, 1969; Carkhuff, 1966; Carkhuff & Truax, 1965a; Grant & Grant, 1975; Magoon & Golan, 1966; Reiff & Reisman, 1965;
Rogers, 1957; Sonnett & Niedenthal, 1968).

Rogers (1957), in stating what he thought were the necessary and sufficient conditions for therapeutic personality change, felt somewhat uneasy about stating his position on the matter:

It is not stated that special intellectual professional knowledge—psychological, psychiatric, medical, or religious—is required of the therapist. Conditions 3, 4, and 5 [congruence, unconditional positive regard, and empathy], which apply especially to the therapist, are qualities of experience, not intellectual information. If they are to be acquired, they must, in my opinion, be acquired through an experiential training—which may be, but usually is not, a part of professional training. It troubles me to hold such a radical point of view, but I can draw no other conclusion from my experience. Intellectual training and the acquiring of information, has, I believe, many valuable results—but becoming a therapist is not one of those results. (p. 101)

Several descriptive studies of projects supported by the National Institute of Mental Health (NIMH) are germane to the functions of paraprofessionals. One hundred and eighty-five projects supported by the NIMH were studied by that agency in 1968 (Sobey, 1970). These projects spread virtually throughout the country. A wide range of functions were reported for the paraprofessional staffs of these agencies. The following is a partial list of the functions identified in the study:

- Caretaking (e.g. ward care or day care)
- Social relationship therapies (individual or group)
- Activity group therapy
Tutoring  
Milieu therapy  
Facilitating to community services  
Individual counseling  
Reception orientation to service  
Re-training (special skill functions)  
Resource finding (home, job)  
Group counseling  
Other special skills  
Other therapeutic functions

Overall, the area of "therapeutic functions," broadly defined as individual counseling, group counseling, socializing relationships, activity group therapy, milieu therapy and other therapeutic functions, seemed to be the primary activity for many paraprofessionals, as well as professionals working in the human services. Many of the new techniques currently in the professional literature, such as behavior modification, game therapy, and family group therapy, were also being employed by paraprofessionals in the field.

In a study reported by True (1974) and conducted by the Center for Human Services Research of 136 randomly selected graduates (20%) from 20 educational programs in mental health, most (78%) of the graduates were working in mental health jobs. Virtually all (98%) of those working in mental health positions reported that they "know how to do group therapy," and 75% were actively engaged in some form of group therapy work. In fact, for 70%, group therapy was one of the primary work activities.

In a more recent study, Alley and Blanton (1976)
report the results of a survey of 15 NIMH New Careers projects in which 381 paraprofessionals were placed in more than 40 different agencies in 15 states. An analysis of written task descriptions submitted by project staff, interviews with the paraprofessionals and their supervisors, and direct observations by the surveyors revealed a pattern of job function where the paraprofessionals typically worked as generalists who carried clients through a number of stages in the delivery of the human services. Among the tasks most commonly performed was some form of counseling, either individual or group. A modified version of the Southern Regional Education Board (1969) functional task analysis of roles was used to categorize the activities of these paraprofessionals. One of the three roles that dominated their jobs was the role of counselor. This role was performed by 71.1% of the paraprofessionals.

The evidence is overwhelming that whether or not paraprofessionals "should" be involved in therapeutic functions, they are involved in performing these functions throughout the country everyday. The question then becomes, how effective are paraprofessionals in performing the therapeutic functions?

Effectiveness of paraprofessionals as counselors

An experimental study was conducted by Ellsworth
(1968) at the Veterans' Administration Hospital, Fort Meade, South Dakota. Male schizophrenic patients in one building \( n = 122 \) were used as the experimental group and their treatment focused on the development of the psychiatric aide as the rehabilitation agent. Male schizophrenic patients from two other buildings \( n = 214 \) were used as the control group. For these patients the rehabilitation agents were the professionals on staff. The treatment programs for both groups were virtually the same in all other respects. A higher percentage of patients from the experimental group were released from the hospital during the course of the study (30 months) and a lower recidivism rate was found on a six year follow-up of these patients. Ellsworth concluded that the use of paraprofessionals in all phases of patient rehabilitation was worthwhile and could prove "highly significant" (p. 165).

Using mature married adults, Harvey (1964) studied subjects who volunteered to be trained as paraprofessional marriage counselors in a study conducted in Australia. The training was primarily in a Client-Centered Rogerian approach. Harvey reports that with approximately 270 persons serving over 15,000 persons each year, 15% of the cases reported the presenting problem solved and another 25% of the cases reported that their marital relations
were noticeably improved.

Studies comparing the effectiveness of trained paraprofessionals with graduate students and professionals have been conducted by Truax at the Arkansas Rehabilitation Research and Training Center. In one study reported by Gartner (1971, p. 44), Truax examined the work of lay therapists who had received 100 hours of systematic human relations training in relation to the work of graduate students in psychology and counseling and experienced therapists. The study involved 150 chronic hospitalized mental health patients. The paraprofessionals were able to demonstrate a level of therapeutic conditions (empathy, warmth, and genuineness) that was only slightly below that of the experienced therapists and considerably above that of the graduate students.

In another study at the Arkansas Center, Truax and Lister (1970) used a 3x2 factorial design to compare the effectiveness of rehabilitation counselors and counselor aides under three case management conditions: (a) a professional counselor working alone; (b) the professional counselor who shares a case load with an aide; (c) and the aide who works under the supervision of a counselor. The results showed the counselor aides to be most effective, the professional counselors next most effective, and the counselors assisted by counselor aides least
effective. The authors conclude that since their findings are consistent with previous research and findings on lay mental health counselors such as Carkhuff and Truax (1965a) and Poser (1966), paraprofessionals should be used to provide direct counseling services.

The Truax and Lister study was severely criticized by McArthur (1970), primarily on the design and specifically on the lack of experimental controls. He does, however, point out that while the generalization of results to other populations is suspect, the results did happen once, for them; therefore, it is possible that paraprofessionals can function effectively as therapists.

There are many other studies which support the contention that paraprofessional counselors can function successfully as counselors in social service agencies, community mental health centers, and hospitals (Brager, 1965; Cantoni & Cantoni, 1965; Carkhuff, 1971; Halpern, 1969; Holzberg, 1963; Levinson & Schiller, 1966).

There has been some research evaluating the use of undergraduate paraprofessionals in academic and personal social helping capacities. A student academic counseling program at Southwest Texas State College was studied by Brown (1965). The student counselors received 40 hours of training prior to counseling with freshmen. During their first year in college, freshmen counseled by these
trained paraprofessionals scored significantly higher on measures of study behavior than did a control group who received no counseling.

A comparison of students who received academic orientation counseling from student counselors with students who received similar counseling by professional counselors was made by Zunker and Brown (1966). The findings showed that the student counselors were as effective as the professional counselors and that students counseled by other students had significantly higher grades during their first term than the students counseled by professionals.

The effectiveness of undergraduate residence hall assistants as group leaders was studied by Wolff (1969) by using groups designed to improve the interpersonal functioning of student participants. The experimental group of undergraduate student group leaders was compared with a group of graduate psychology student group leaders. Wolff found that the graduate student group leaders performed slightly more effectively but that both groups were able to effect significant improvement in their respective group members on a variety of interpersonal measures.

The above studies tend to support the contention that paraprofessionals can function as effective therapeutic agents in a variety of settings. What, then, are
the best methods to train paraprofessionals for this therapeutic function?

Training of paraprofessionals

The first question to be answered concerning the training of paraprofessionals to perform a therapeutic function is, what specific skills are necessary for this function? Robinson (1955) wrote of the need for warm understanding on the part of the helper. Rogers (1957) identified what he thought were the necessary and sufficient conditions for constructive personality change. These conditions included congruence, unconditional positive regard, and the communication of an empathic understanding to the helpee.

Truax and Carkhuff (1967) studied these core ingredients in great depth and found much support for their inclusion as basic skills necessary for effective counseling. They changed the names of the core elements identified by Rogers to genuineness, warmth, and empathy. Carkhuff and Berenson (1967) added two new dimensions to the core facilitative conditions; they identified the concepts of respect and concreteness as important additions to the primary core dimensions of effective counseling. These conditions were further described by Gazda et al. (1973) and the definitions of warmth and
respect were differentiated. In addition, Gazda et al. added yet another dimension to the list—the concept of appropriate self-disclosure. Gazda et al., therefore, lists empathy, warmth, respect, genuineness, concreteness, and self-disclosure as the facilitative dimensions of effective counseling. These dimensions are also commonly called human relations skills (Gazda et al., 1973) and interpersonal skills (Carkhuff, 1971).

After a review of the research indicating these major ingredients of effective counseling, Truax (1970) wrote:

The most clear-cut and striking body of evidence available concerning basic ingredients in effective counseling deals with central interpersonal skills possessed by counselors. As the evidence accumulates, it becomes clear that the counselor's interpersonal skill in relating to clients has much to do with inducing positive client change. While specialized techniques and expert knowledge are believed important, it is already clear that they are secondary: the effective counselor is first and foremost an expert in interpersonal relations. (p. 6)

In even stronger language, Patterson (1974) put it this way:

This evidence means that it is no longer possible for instructors in counseling or psychotherapy to pretend a neutrality—or objectivity—in their teaching. It does not suffice to expose students to the major theories, telling them that they all appear to be equally effective (or ineffective) and that we have no basis in research on which to make a choice. It is thus no longer possible, in a pseudo-democratic manner, to tell students to take
their choice or to construct their own personal theories or approaches. Research has made apparent the commonalities among the apparently widely different approaches and provided evidence that it is these common variables [empathy, warmth, respect, etc.], not unique variables or conclusions, that account for the effectiveness of the different approaches. (p. x)

Instructors who teach human relations skills have the option of using either a nonsystematic approach or a systematic approach to their training. In a nonsystematic lecture-discussion-reading approach, important dimensions of effective human relations are talked "about" rather than being operationally defined and trained as skills. There are several text books on the market that typify this approach (Brammer, 1973; Combs, Avila, & Purkey, 1971; Davis, 1976; Hamacheck, 1971; Johnson, 1972).

The other approach is a much more systematic training of the skills. It is more of a "how to" approach than a "what is" approach. Carkhuff and Truax (1965b) were first to develop what they called an integrated didactic-experiential training model. They used a five step training process:

1. Subjects were didactically taught therapeutic dimensions of helper empathic understanding, respect, genuineness, and helpee self-exploration.

2. Subjects learned to discriminate levels of each of these dimensions by practicing rating audiotaped responses.
3. Subjects received empathy training by writing responses to audiotaped segments.

4. Subjects role played and evaluated their own facilitativeness on the scales.

5. Subjects interviewed a helpee and received feedback on their performance on the scales.

The scales mentioned in 4 and 5 above are 5 point scales in which a rating of 1.0 is considered nonfacilitative, a rating of 3.0 minimally facilitative, and a rating of 5.0 the most facilitative on each of the dimensions.

This approach met with considerable success in training a variety of subject groups. After only 10 hours of training, graduate students and lay helpers were trained to function at levels comparable to professionals (Carkhuff & Truax, 1965a). A group of undergraduate resident assistants were systematically trained in the interpersonal skills by Dendy (1971). He found that these students learned to function at increased levels of facilitative effectiveness in helping relationships. In fact, he found no significant difference between the student trainees and a group of experienced professional counselors on the dimensions studied. He also noted that on a three month follow-up, there was no significant loss in skills.

Carkhuff (1969a, 1971) cites a body of research showing significant gains in the core dimensions after training for housewives, nurses, teachers, parents,
college students, minority groups, and delinquent youths. Additionally, Carkhuff (1971) has found a high relationship between the trainers' levels of functioning and the trainees' mean gain in levels of functioning. In fact, Carkhuff states:

If the trainer is functioning at high levels of the dimensions on which the trainee is being trained, the probability of the success of training with any trainee population is high. If the trainer is functioning at low levels of relevant dimensions, the probability of the success of training is low. (p. 185)

He also points out that, in general, trainees who function at the highest levels in the human relations skills at the beginning of a training program are the ones who function at the highest levels at the end of the training course. This finding that pretraining abilities are a good predictor of posttraining abilities in human relations skills is especially true in time limited programs (Carkhuff, 1969b). It has also been shown that trainees retain their relative level of functioning over time (Collingwood, 1970; Holder, 1969). It follows, then, that some method of increasing the level of functioning of entering trainees prior to the beginning of a counseling course would indeed increase the effectiveness of the counseling course.

A series of texts that are essentially training manuals for the systematic training of the human relations
skills have been published by Carkhuff (1969a, 1969b, 1973, 1975) and Gazda et al. (1973, 1975). The Gazda et al. model for training is very similar to Carkhuff's and researchers using the Gazda et al. model have found it to be very successful in effecting significant gains in the facilitative dimensions for subjects from a variety of backgrounds (Bixler, 1972; Childers, 1973; Deneen, 1973; Geitgy, 1966; Hornsby, 1973; Kratochvil, 1969).

The findings of these studies indicate that, in general, systematic human relations training is an effective method for increasing the human relations skills of the trainees. None of these studies, however, used students involved in a two-year associate of arts degree paraprofessional program as their subject population. Virtually all of the literature on systematic human relations training uses subjects from two main categories: graduate or upper class college students or persons working in the field of mental health at the time of the study. Associate degree students generally differ from both of these groups in age and experience. Approximately two-thirds of associate degree students are recent high school graduates and are in their first year of college (Young, 1974). Also, a vast majority of associate of arts degree students have had no direct mental health experience before entering the programs (True, 1974).
The question of whether training approaches that have been found to be effective with other populations will be effective with associate of arts degree students will be addressed in this study.

Transfer of systematic human relations training

In his book, *Cry Twice*, Carkhuff (1974) explains a system of training staff members of the Rhode Island Training School for Boys in systematic human relations training and then having the trained staff members train other staff members. Carkhuff (1971) also used this concept successfully at the Springfield Concentrated Employment Program under the Massachusetts Department of Labor.

An investigation of the concept of transferability of training with college students was reported by Archer and Kagan (1973). They used a composite training model including interpersonal process recall (Kagan & Krathwohl, 1967), affect simulation (Kagan, Schauble, Resnikoff, Danish, & Krathwohl, 1969), and empathy training (Carkhuff & Truax, 1965; Carkhuff & Berenson, 1967). Resident assistants were given intensive training in the interpersonal skills using the above mentioned model. These students were then asked to train other student volunteers from the same university in the same skills using the same model. The transfer of training proved...
successful and the authors concluded that with appropriate training and supervision, undergraduates can function as paraprofessional trainers for the teaching of interpersonal communication skills.

One of the implications for further research suggested by Archer and Kagan (1973) was as follows:

Because the structured training model has proved to be a useful way of teaching interpersonal skills, a further investigative step would be to evaluate specific phases of the model in an attempt to define more narrowly the most potent parts of the model. (p. 540)

The present study examines the part of the Archer and Kagan study referred to as empathy training.

Statement of Variables and General Hypotheses

The present study was divided into two major divisions. Systematic human relations training, as described by Gazda et al. (1973), functioned as an independent variable in both parts. In part one, an alternative non-systematic teaching approach also functioned as an independent variable. Subjects' performance scores on the two parts (discrimination and responding skills) of the Counseling Skills Evaluation (Wolf, 1976) functioned as the dependent variable.

The general hypotheses to be investigated in this study are as follows:
$H_1$: Subjects in a class receiving systematic human relations training will demonstrate significantly higher discrimination skills on the Counseling Skills Evaluation than subjects in a human relations class receiving nonsystematic training.

$H_2$: Subjects in a class receiving systematic human relations training will demonstrate significantly higher responding skills on the Counseling Skills Evaluation than subjects in a human relations class receiving nonsystematic training.

$H_3$: Subjects receiving systematic human relations training from second year students will demonstrate significantly higher discrimination skills on the Counseling Skills Evaluation than subjects not trained in human relations skills.

$H_4$: Subjects receiving systematic human relations training from second year students will demonstrate significantly higher responding skills on the Counseling Skills Evaluation than subjects not trained in human relations skills.

$H_5$: Subjects trained by second year students who
are functioning at the highest levels of discrimination skills will show the highest gain in discrimination skill scores on the Counseling Skills Evaluation.

$H_6$: Subjects trained by second year students who are functioning at the highest levels of responding skills will show the highest gain in responding skill scores on the Counseling Skills Evaluation.

These hypotheses are restated in the testable null form in Chapter II, p. 47.

Summary and Overview

The present study focuses on the training of para-professionals within a two-year associate of arts degree mental health program in the core facilitative conditions that are necessary for effective therapeutic interpersonal relationships. The concept of the transferability of this training from a trained second year student to an untrained entering student is also studied. The training model of systematic human relations training most closely approximates the part of the Archer and Kagan (1973) study referred to by the authors as empathy training. An important characteristic of this study is the fact that it is carried out as an integral part of the
curriculum of an existing two-year associate of arts degree program.
CHAPTER II

DESIGN AND METHODOLOGY

The present study was accomplished in two major parts. In part one, two training methods for the teaching of human relations skills were compared. In part two, the concept of transferability of human relations skills from second year students to first year students was studied.

In part one, the nonequivalent control group design (Campbell & Stanley, 1963) was used. This design was employed to compare the differences between two naturally assembled experimental groups after treatment.

In part two of the study, the pretest-posttest control group design (Campbell & Stanley, 1963) was used. This design compared the differences between an experimental and a control group after a specific treatment was administered to the experimental group and no specific treatment was administered to the control group.

In both parts of the study, systematic human relations training, as described by Gazda et al. (1973), functioned as an independent variable. In part one, an alternative nonsystematic teaching approach also functioned as an independent variable. Subjects'
performance scores on the two parts (discrimination and responding skills) of the Counseling Skills Evaluation (Wolf, 1976) functioned as the dependent variables. Table 2.1 on page 32 provides an outline of experimental procedures of this project.

Selection and Description of Subjects

A total of 123 students enrolled at Lake Superior State College participated in this study. They ranged from 18 to 53 years of age, with a mean age of 22.9 years. Of the 123 students, 39 were male and 84 were female. The uneven distribution by sex is consistent with national norms for student populations in mental health aide programs (Young et al., 1974). These students came from a variety of socio-economic backgrounds and, with the exception of race, were representative of undergraduate college students in general. There were only two blacks and three native Americans represented in the sample. The small percentage of minority students reflects the student population at Lake Superior State College rather than any selective process in choosing subjects.

For part one of the study, 40 students enrolled in a counseling class within the mental health aide program and 18 students enrolled in a human relations class
<table>
<thead>
<tr>
<th></th>
<th><strong>Part One</strong></th>
<th><strong>Part Two</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Approximately 10 weeks</td>
<td>Approximately 10 weeks</td>
</tr>
<tr>
<td><strong>Group A</strong> N=40</td>
<td>Pre-test Systematic human relations training in class by professional, 40 hours</td>
<td>Post-test Systematic human relations training by student from Group A, 6 hours</td>
</tr>
<tr>
<td><strong>Group B</strong> N=18</td>
<td>Pre-test Nonsystematic human relations training in class by professional, 40 hours</td>
<td>Post-test No training received</td>
</tr>
</tbody>
</table>
within the psychology department were used as subjects. Both classes were designed to accomplish a similar objective which was to increase the students' knowledge of positive human relations.

For the second part of the study, 65 volunteers were recruited from the student body of Lake Superior State College. These students were enrolled in either the mental health aide, psychology, or sociology curriculums.

Assignment of Subjects

In part one of the study, the subjects were a priori "assigned" as a function of the class in which they were enrolled. Assignment of treatment to the two classes, while preordained, is assumed to be unbiased and random. This procedure is appropriate in a quasi-experimental design (Campbell & Stanley, 1963).

In part two of the study, a random selection process was used to assign subjects to two groups. Sixty-five was the maximum number of students available who were willing to donate up to 10 hours of their time to this study. Since 40 trainers were available from part one of the study, 40 of the 65 volunteers were selected at random to be in the experimental group (receive training) and the remaining 25 volunteers were assigned to the control group (no training). The procedure used for
randomization was to number 65 slips of paper (1 through 65) and draw one at a time from a box for assignment to the experimental group. Each slip was replaced after it was recorded. When 40 subjects had been assigned to the experimental group, the remaining 25 were assigned to the control group.

Instrumentation

The Counseling Skills Evaluation is a 16MM film in two parts which was developed by Wolf (1976). Part I of the film consists of 12 portrayals of people in distress. Subjects were asked to respond in writing to each individual portrayal as if they were actually attempting to help. The responses were then evaluated by judges using operationally defined scales developed for this purpose. (Copies of these scales are presented in Appendix B, p. 89.)

In Part II, the film presents 12 portrayals of people in distress, each being followed by five counselor responses. Subjects were asked to rate the helpfulness of each statement on a 5 point scale ranging from destructive (level 1) to extremely helpful (level 5). Their ratings were then compared to those of experts. The experts were persons who, (a) had extensive training (150 hours) in the interpersonal communication skills...
measured in the test, (b) functioned as trainers in skills training programs, (c) were judged to be highly skillful and effective counselors by Wolf on the basis that they were frequently and consistently sought out as helpers by clients, peers, friends, and colleagues, and (d) scored in the very discriminating range (.04) of Carkhuff's Discrimination Scale (1969a). Additionally, these individuals had been rated by other professionals and trainees as being outstanding in the core qualities of effective counselors (Wolf, 1976).

A slight modification was made on Wolf's instrument for use in the present study. The application of the total evaluation takes approximately 1 hour and 40 minutes. This length of time was deemed too long, considering the class schedule of the volunteer students. Classes at Lake Superior State College generally last 50 minutes. If the instrument could be shortened to fit within a 1-hour slot, it was reasoned that volunteers would be more likely to come to the pre and post applications of the evaluation. Wolf (1976), in a discussion of the normative data, makes the following point:

...subjects' rated responses to each of the twelve portrayals on Part I were correlated with total score on Part I. For all 200 subjects, these correlations ranged from .51 to .85. Thus, a subject's rated response to any given portrayal tends to be predictive of his mean (total score) response to all twelve. (p. 13)
Part I of the **Counseling Skills Evaluation** was therefore modified to include only the first four portrayals. This modification allowed the delivery of the total evaluation to be accomplished in approximately 50 minutes and volunteer students were able to take the test during unscheduled class periods.

The **Counseling Skills Evaluation** derives its construct validity from the work of Rogers (1957), Carkhuff and Berenson (1967), Truax and Carkhuff (1967), and Carkhuff (1969a, 1969b), and has been subjected to testing and research by the author of the evaluation (Wolf, 1970, 1972, 1975). It differs from other similar evaluations such as Carkhuff's (1969a) **Index of Communications** and **Index of Discrimination** and the **Index of Responding** (Gazda et al., 1975) in that it adds the audiovisual dimension of filmed professional actors to give "life" to the various portrayals. The **Counseling Skills Evaluation** is also the first such instrument for which a manual has been published. This manual (Wolf, 1976) includes information on the rationale, administration, scoring, reliability, and norms. The **Counseling Skills Evaluation** is, therefore, a standardized test of counseling skills. This fact makes the instrument particularly useful in a study such as this where accurate replicability is essential.
Experimental Procedures

Since there were two distinct parts to this study, the procedures for each part will be discussed separately. In the first part of the study, a comparison was made of two training techniques for human relations skills. In the second part of the study, the transfer of training from one trainee to another was investigated.

Part one of the study

Two classes were chosen for investigation in part one of the study. They were entitled Techniques in Interviewing and Counseling (Mental Health 201) and Human Relations (Psychology 302). Lake Superior State College is on a quarterly schedule; the courses run for 10 weeks. Both classes were taught by professional counselors. The professor who taught Human Relations holds a PhD in Counseling. The professor for Techniques in Interviewing and Counseling is the chief investigator for this study and has had approximately 75 hours of systematic human relations training.

During the first class session of each course, the Counseling Skills Evaluation was administered to all students enrolled in the classes. The students were informed that the results of the evaluation would be
shared with them at the end of the course. The results of the pretest were therefore not shared with the students until after the posttest had been administered. This procedure was followed to minimize the testing effect on the internal validity of the study. It was reasoned that knowledge of results of the evaluation could cause anxiety or complacency in some subjects when confronted with the posttest.

The Techniques of Interviewing and Counseling course was designed to use an integrated didactic-experiential approach which included the systematic human relations training model described by Gazda et al. (1973). The didactic phase of the course consisted of approximately 20 hours (2 hours per week) of lecture-discussion sessions describing and discussing the following topics:

- The act of attending and perceiving
- The act of responding
- Ineffective communication styles
- The scales for rating responses
- Perceiving feelings
- Perceiving and responding with empathy
- Perceiving and responding with respect
- Perceiving and responding with warmth
- Perceiving and responding with concreteness
- Perceiving and responding with genuineness
- Perceiving and responding with self-disclosure

Concurrently, 20 hours (2 hours per week) were devoted to lab sessions. Students were asked to work in dyads and triads practicing and demonstrating the skills explained in the didactic phase of the course. After being taught
the rating system, students would give each other feedback in terms of a rating for the skill being practiced. The scales listed in Appendix B, p. 89, were used for this purpose. Furthermore, each student had at least two opportunities to have his or her interaction with another student video-taped. Immediately after each taping session, the students involved received feedback from the instructor, as well as approximately 10 other students who watched the interaction from another room on a closed circuit monitor. During the feedback session, the observers rated the student's modal response level using a 1.0 (destructive) through 5.0 (very facilitative) global scale (Wolf, 1976). The tape was then replayed and the students were encouraged to recall personal feelings they had experienced during the interaction and to rate their own performance. Finally, the various dimensions (empathy, respect, warmth etc.) were discussed in light of the interaction under review.

The textbooks used for the course were Human Relations Development: A Manual for Educators (Gazda et al., 1973) and The Art of Helping (Carkhuff, 1973). Human Relations Development was covered chapter by chapter in the didactic section of the course and the students were asked to do the exercises in each chapter as homework assignments. These exercises gave the students additional
and continued practice in rating responses and provided a means for immediate feedback, since the suggested answers to each exercise are contained in the text. The Art of Helping was used as a supplementary reading with emphasis placed on chapters two (attending) and three (responding).

Each student in this class was also asked to develop a typewritten plan for the training of a first year student in the interpersonal relationship skills. The plan was to be designed for training sessions totaling 6 to 8 hours. The students were informed that their plans would become operational during the following term when each student would actually train a first year student in the interpersonal relationship skills. The students were encouraged to be creative in the development of their training plans. One hour of class time was devoted to an open discussion of various training techniques that could be used. The finished plans were turned into the instructor for review and feedback. The major problems encountered in the original plan designs were that approximately 25% of the students had written plans that attempted to cover too much material for the allotted time of 6 to 8 hours or that required use of video-tape equipment which could not be used on an individual unsupervised basis. After a discussion of these problems
between the students and the instructor, the students revised their plans to more closely fit the parameters of the class and the rules of the institution.

The students were free to be creative in the design of their training plans and, while all students used a systematic human relations training model, the plans differed from one another according to individual preference. Variations of the basic integrated didactic-experiential approach included the following: The use of cassette tape recorders to tape role-playing situations which allowed for self-rating by the trainee; the development of audio-taped exercises simulating the approach used on the Counseling Skills Evaluation; and role reversal techniques in which the trainer would first play the role of helper with the trainee playing the role of helpee in order to model appropriate behavior and then ask the trainee to play the role of helper and practice empathic, warm and respectful responses.

The objective of having each student develop his or her own training plan was to achieve a good match between the training plan and the individual personality of the trainer. A secondary objective was to raise the motivation level of the trainers by having them plan and deliver their own approach to systematic human relations training. An example of a student training plan is found
in Appendix C, p. 104.

The Human Relations course was delivered in lecture-discussion fashion with an emphasis on discussion. The following topics were covered: (a) working with people, (b) social systems, (c) mainspring of motivation, (d) communication, (e) group processes, (f) and development of participation.

A structured discussion format was set up in which small groups of three to five students would discuss and analyze a case. The cases were taken from the text used for the course, Human Behavior at Work (Davis, 1972). The students were asked to read approximately eight such cases during the term. Each group was then asked to identify and discuss the following points: (a) important points of the relationship discussed in the case, (b) the main points of agreement in the people contacts, (c) the points or areas of disagreement, (d) alternative solutions to the problem, (e) and the problem solving approach used and how it would improve the behavioral climate of the situation. Group analysis of the case was then put in written form and submitted to the professor for critique and feedback.

A second administration of the Counseling Skills Evaluation, which was given all students in both classes at the final class meetings, functioned as the posttest
for part one of the study.

Part two of the study

The second part of the study was designed to investigate the transferability of the training received by the 40 students in the Techniques of Interviewing and Counseling course. Volunteer students were recruited from the student body of Lake Superior State College. These volunteers were given the Counseling Skills Evaluation. They were informed that they would be asked to take a similar test in 10 weeks and that they would be given the results of both tests after the second test had been taken.

The volunteers were then separated into two groups. One group was designated a control group and received no systematic human relations training prior to the posttest. The other group was designated the experimental group. Students in the experimental group were assigned to a student who had completed the Techniques of Interviewing and Counseling course the previous term. Each pair of students then made arrangements for an initial meeting, the purpose of which was to explain the training to be delivered and to develop a training schedule. The trainers were encouraged to arrange six 1-hour sessions. They were free, however, to use variations such as three
2-hour or two 3-hour sessions if the situation required such a schedule. Approximately 10% of the pairs chose an alternative to the six 1-hour sessions approach. All training sessions were required to be completed during an 8 week period in the winter term. The first week of the term was used for making the assignments of student trainees to student trainers. The final week was used for administering the posttest.

During the term, the student trainers met once a week in groups of 10. These groups were 2 hours in length and were part of a second course in counseling (Mental Health 202) within the mental health aide program. The course was taught by the same professor who taught the initial course (Mental Health 201). The student trainers were therefore able to deal with difficulties and concerns that arose during their training sessions with their trainees. Feelings of inadequacy and lack of success were chief among the concerns of the student trainers. The trainers gave support to each other in these groups and also shared techniques that seemed to be working. Many revisions to the training plans were made during these groups and this was encouraged by the instructor. During the 10th week of the term, the Counseling Skills Evaluation was again administered to the experimental and the control group.
Data Collection and Scoring

The data for this study consisted of responses noted on a form developed by Wolf (1976) to correspond to the Counseling Skills Evaluation. A copy of this form is found in Appendix D, p. 108. There were two parts to the evaluation. In part one, subjects responded in writing to a "client statement" given by a professional actor on the film. These responses were written on the blank side of the form. In the second part of the evaluation, subjects rated counselor responses using numerical designators ranging from 1 to 5 which is actually a 9 point scale since half points such as 2.5 are allowed. These ratings were listed in the 60 blanks provided on the form.

The scoring of the first part of the evaluation was done by two judges. Two naive judges were selected and trained in the scoring procedure. Naive judges were selected to assure unbiased judgments based upon the operational definitions for the various levels of responding. It was reasoned that professional counselors would have greater difficulty surrendering their own beliefs and values developed from their everyday practice to the operational definitions used in this study than people who were not professional counselors. The judges were both intelligent and well educated. One judge holds a
Master of Science degree in Library Science, while the other a Bachelor of Science degree in Animal Husbandry. Both judges graduated from college with honors.

An instruction booklet containing instructions for scoring, examples of experts' ratings, along with their rationale, and the scales used for judging was prepared and given to the judges (see Appendix B, p. 89). The two judges were then trained for 5 hours by the chief investigator of this study. Practice ratings using items from the Gazda et al. book (1973) were performed until a .85 or better interjudge reliability (rho) was achieved on 20 items. When this level was reached (the actual rho achieved on the 20 items was .94), the chief investigator gave the 984 statements to the judges for rating. The statements were number coded at random and submitted to the judges in the same order.

The judges rated a total of eight items for each subject. Four of these items were the subject's pretest and four were the subject's posttest. The four ratings from each judge for the pretest were averaged and two pretest scores for each subject were thus obtained. The mean of these two scores was then assigned to each subject as his or her pretest responding skill score. The same procedure was then applied to the posttest ratings to give each subject a posttest responding skill score.
On the second part of the evaluation, each rating by the subject of a counselor response was compared to the modal rating given that response by a group of experts. An absolute difference between the subject's rating and the experts' modal rating was calculated for each of the 60 ratings given by each subject. These difference scores were then averaged to give each subject a discrimination skill score.

Hypotheses

Four null hypotheses for differences between groups were formulated. Two additional null hypotheses for correlation between groups were formulated. The specific hypotheses in research form are as follows:

\( H_0^1: \) There will be no difference in mean gain in responding skill scores on the Counseling Skills Evaluation between subjects in a class receiving systematic human relations training and subjects in a human relations class not receiving systematic skills training.

\( H_0^2: \) There will be no difference in mean gain in discrimination skill scores on the Counseling Skills Evaluation between subjects in a class receiving systematic human relations training and subjects in a human relations class not receiving systematic skills training.

\( H_0^3: \) There will be no difference in mean gain in responding skill scores on the Counseling Skills Evaluation between a group of subjects receiving systematic human relations training from second year students and a group of subjects not trained in the human relations skills.
Ho$_4$: There will be no difference in mean gain in discrimination skill scores on the Counseling Skills Evaluation between a group of subjects receiving systematic human relations training from second year students and a group of subjects not trained in the human relations skills.

Ho$_5$: The population correlation between the responding skill scores on the Counseling Skills Evaluation of the student trainers and the gain in responding skill scores after training of the student trainees will be equal to zero.

Ho$_6$: The population correlation between the discrimination skill scores on the Counseling Skills Evaluation of the student trainers and the gain in discrimination skill scores after training of the student trainees will be equal to zero.

Data Analysis

The hypotheses of this study were analyzed statistically through the use of $t$ tests and the Spearman rank correlation coefficient (rho). The $t$ tests were used as follows:

To test significance of difference between the two classes in part one of the study after treatment.

To test significance of difference between the two groups in part two of the study after treatment.

The Spearman rank correlation (rho) technique was used to address two further questions relevant to the study:

To test for agreement (reliability) between the two judges.
To test the relationship between the student trainers' levels of functioning in human relations skills at the time of training and their trainees' gain in these same skills after training.
CHAPTER III

RESULTS

An analysis of the data and a report on the results are presented in this chapter. Each hypothesis is re-stated and the data relevant to each hypothesis are presented. A level of $P < .05$ was established as the minimum level for significance. Presentation of the data, however, will follow the recent trend in behavioral science research which is to report the findings and the level at which the null hypotheses can be rejected.

A discussion of the meaning, significance, and the implications of this data, as well as recommendations for application and future research, are presented in Chapter IV.

Interjudge Reliability

Prior to the analysis of the data for Part I of the Counseling Skills Evaluation, it was necessary to establish a significant level of reliability between the scores assigned by the two judges. Each judge rated a total of 984 responses. This represented eight responses for each of the 123 subjects. Four of these were pre-test scores and four were posttest scores. Each set of
four was averaged and each subject was thus assigned a mean pretest and a mean posttest score by each judge. Spearman's rho (Siegel, 1956) was applied to the 246 mean scores assigned by the two judges. The correlation coefficient of .88 was obtained. The significance (t) of this rho was determined by the method detailed by Kendall (Siegel, 1956, p. 212) for N's larger than 10. A critical value of 28.98 was obtained which indicates a significant (P < .001) level of reliability between the scores assigned by the two judges.

The two judges' ratings for each subject were then averaged and a final pretest and posttest response skill score was assigned to each subject. These scores were then deemed appropriate for group comparison analysis.

Hypotheses for Differences Between Training Methods

H0₁: There will be no difference in mean gain in responding skill scores on the Counseling Skills Evaluation between subjects in a class receiving systematic human relations training and subjects in a human relations class not receiving systematic skills training.

Data relevant to the evaluation of this hypothesis are presented in Table 3.1 on page 52. Group A received the systematic human relations training while Group B received a nonsystematic human relations training.
TABLE 3.1
A Comparison of Mean Responding Skill Gain Scores for Groups Receiving Systematic (Group A) and Nonsystematic (Group B) Human Relations Training

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre-test</th>
<th>Mean Post-test</th>
<th>Mean Gain Score</th>
<th>SD Gain Score</th>
<th>t</th>
<th>P &lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.30</td>
<td>3.02</td>
<td>1.645</td>
<td>.85</td>
<td>7.20</td>
<td>.001</td>
</tr>
<tr>
<td>B</td>
<td>1.31</td>
<td>1.42</td>
<td>.118</td>
<td>.40</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the basis of chance, if no actual differences existed between the gain in responding skill scores for groups receiving systematic human relations training and groups receiving nonsystematic human relations training, the expected probability of finding differences as great as those found between Groups A and B would be less than 1 out of 1,000. The hypothesis Ho - is therefore rejected. The data support the alternative hypothesis H1 which states that subjects in a class receiving systematic human relations training will demonstrate significantly higher gains in responding skill scores on the Counseling Skills Evaluation than subjects in a human relations class not receiving systematic training.

An examination of the pretest and posttest means shows a marked improvement in Group A while indicating a
slight gain in Group B. Group A's posttest mean of 3.02 is slightly higher than the minimal level (3.0) for facilitative or helpful responding. The other three mean test scores fall between the destructive (1.0) and harmful (2.0) levels of responding (Wolf, 1976).

\[ H_0^2: \text{There will be no difference in mean gain in discrimination skill scores on the Counseling Skills Evaluation between subjects in a class receiving systematic human relations training and subjects in a human relations class not receiving systematic skills training.} \]

Data relevant to the evaluation of this hypothesis are presented in Table 3.2. Group A received the systematic human relations training while Group B received a nonsystematic human relations training.

### TABLE 3.2

A Comparison of Mean Discrimination Skill Gain Scores for Groups Receiving Systematic (Group A) and Nonsystematic (Group B) Human Relations Training

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre-test</th>
<th>Mean Post-test</th>
<th>Mean Gain Score</th>
<th>SD Gain Score</th>
<th>t</th>
<th>P &lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>1.30</td>
<td>.73</td>
<td>.574</td>
<td>.16</td>
<td>12.68</td>
<td>.001</td>
</tr>
<tr>
<td>B</td>
<td>1.40</td>
<td>1.45</td>
<td>-.043</td>
<td>.19</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the basis of chance, if no actual differences existed between the gain in discrimination skill scores for...
groups receiving systematic human relations training and
groups receiving nonsystematic human relations training,
the expected probability of finding differences as great
as those found between Groups A and B would be less than
1 out of 1,000. The hypothesis $H_{o2}$ was therefore rejected.
The data support the alternative hypothesis $H_{2}$ which
states that subjects in a class receiving systematic hu­
man relations training will demonstrate significantly
higher gains in discrimination skills on the Counseling
Skills Evaluation than subjects in a human relations
class not receiving systematic training.

An examination of the means of the pretest and post-
test shows a marked improvement for Group A while reveal­
ing a slight loss in Group B. Group A's pretest mean of
1.30 can be translated to a percentile score of 32 (Wolf,
1976) while a mean of .73 has a percentile score of 94.
Group B's means of 1.40 and 1.45 are at approximately
the 23rd percentile.

Hypotheses for Transfer of Training

$H_{o3}$: There will be no difference in mean gain
in responding skill scores on the Counseling Skills Evaluation between a group
of subjects receiving systematic human
relations training from second year stu­
dents and a group of subjects not trained
in human relations skills.

Data relevant to the evaluation of this hypothesis
are presented in Table 3.3. Group C received systematic human relations training from a trained student in the associate of arts mental health aide program. Group D was a control group of students who received no training.

**TABLE 3.3**

A Comparison of Mean Responding Skill Gain Scores for a Group Systematically Trained by Students (Group C) and a Control Group (Group D)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre-test</th>
<th>Mean Post-test</th>
<th>Mean Gain Score</th>
<th>SD Gain Score</th>
<th>t</th>
<th>P &lt;</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.27</td>
<td>2.75</td>
<td>1.485</td>
<td>.52</td>
<td>11.97</td>
<td>.001</td>
</tr>
<tr>
<td>D</td>
<td>1.45</td>
<td>1.47</td>
<td>.025</td>
<td>.39</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

On the basis of chance, if no actual differences existed in the gain in responding skill scores between students trained by other students and students not trained in the human relations skills, the expected probability of finding differences as great as those found between Groups C and D would be less than 1 out of 1,000. The hypothesis \( H_0 \) was therefore rejected. The data support the alternative hypothesis \( H_3 \) which states that subjects receiving systematic human relations training from second year students will demonstrate
significantly higher gains in responding skills on the Counseling Skills Evaluation than subjects not trained in human relations skills.

An examination of the mean pretest and posttest scores shows that in no case did the responding skill scores reach the minimum level (3.0) for facilitative or helpful responding. The posttest for Group C, however, approaches this level while the other three mean scores fall between the destructive level (1.0) and the harmful level (2.0) of responding (Wolf, 1976).

\[ H_{04}: \text{There will be no difference in mean gain in discrimination skill scores on the Counseling Skills Evaluation between a group of subjects receiving systematic human relations training from second year students and a group of subjects not trained in human relations skills.} \]

Data relevant to the evaluation of this hypothesis are presented in Table 3.4 on page 57. Group C received systematic human relations training from a trained student in the associate of arts mental health aide program. Group D was a control group of students who received no training.

On the basis of chance, if no actual difference existed in the gain in discrimination skill scores between students trained by other students and students not trained in the human relations skills, the expected probability of finding differences as great as those
found between Groups C and D would be less than 1 out of 1,000. The hypothesis $H_{04}$ was therefore rejected.

**TABLE 3.4**

A Comparison of Mean Discrimination Skill Gain Scores for a Group Systematically Trained by Students (Group C) and a Control Group (Group D)

<table>
<thead>
<tr>
<th>Group</th>
<th>Mean Pre-test</th>
<th>Mean Post-test</th>
<th>Mean Gain Score</th>
<th>SD Gain Score</th>
<th>$t$</th>
<th>$P &lt;$</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>1.32</td>
<td>.78</td>
<td>.551</td>
<td>.21</td>
<td>8.93</td>
<td>.001</td>
</tr>
<tr>
<td>D</td>
<td>1.38</td>
<td>1.30</td>
<td>.085</td>
<td>.20</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The data support the alternative hypothesis $H_4$ which states that subjects receiving systematic human relations training from second year students will demonstrate significantly higher gains in discrimination skills on the Counseling Skills Evaluation than subjects not trained in human relations skills.

The pretest means of 1.32 for Group C and 1.38 for Group D can be translated to percentile scores of 30 for Group C and 25 for Group D (Wolf, 1976). The posttest means of .78 for Group C and 1.30 for Group D can be expressed in percentile scores of 93 for Group C and 32 for Group D.
Hypotheses for Relationship Between Each Student Trainer's Level of Functioning and His or Her Student Trainee's Gain Score

Ho₅: The population correlation between the responding skill scores on the Counseling Skills Evaluation of the student trainers and the gain in responding skill scores after training of the student trainees will be equal to zero.

The Spearman rank correlation coefficient (rho), along with the Kendall method for determining significance for N's larger than 10, was used to test this hypothesis.

A Spearman rank correlation between each student trainer's level of responding skill and his or her student trainee's gain in responding skill scores after training yielded a rho of .06. A correlation of this magnitude signifies that there was a very weak positive relationship between the student trainer's levels of functioning in responding skills and the gain scores of their trainees in this study. The Kendall method for determining significance yielded a t of .38 which indicates that the correlation is not significant. The data, in this case, therefore reveal that Ho₅ cannot be rejected at a statistically significant level.

Ho₆: The population correlation between the discrimination skill scores on the Counseling Skills Evaluation of the student trainers and the gain in discrimination
skill scores after training of the student trainees will be equal to zero.

The Spearman rank correlation coefficient (rho), along with the Kendall method for determining significance for N's larger than 10, was used to test this hypothesis.

A Spearman rank correlation between each student trainer's level of discrimination skill and his or her student trainee's gain in discrimination skill scores after training yielded a rho of -.126. A correlation of this magnitude indicates that there was a very weak negative relationship between the student trainers' levels of functioning in discrimination skills and the gain scores of their trainees in this study. The Kendall method for determining significance yielded a t of .78 which indicates that the relationship is not significant. The data in this case therefore reveal that H0 cannot be rejected at a statistically significant level.

Summary

A Spearman rank correlation coefficient (rho) was used to determine interjudge reliability between the two judges' ratings for the subjects' responses to Part I (responding skills) of the Counseling Skills Evaluation. A rho of .88 was found and subjected to the Kendall method for testing significance. This method yielded
a $t$ of 39.68 which signified a significant correlation ($P < .001$) between the two judges' ratings. The inter-judge reliability was therefore considered strong enough to use the judges' ratings for analysis.

The $t$-test comparisons were calculated for differences in mean gain scores between two types of human relations training. Differences in gain scores for both responding skills and discrimination skills were investigated. Significant differences ($P < .001$) were found for both skills and the null hypothesis was rejected in each case. Differences of this magnitude lead to the conclusion that there was a significant increase in both responding and discrimination skills for students receiving systematic human relations training when compared to students receiving nonsystematic human relations training.

The $t$-test comparisons were also calculated for differences in mean gain scores between a group of student volunteers trained by other students and a control group of student volunteers not trained in human relations skills. Again, differences in gain scores for both responding skills and discrimination skills were investigated. Significant differences ($P < .001$) were found for both skills and the null hypothesis was rejected in each case. The rejection of the null hypotheses supports the case for believing there was a significant increase in
both responding and discrimination skills for students receiving systematic human relations training from other students when compared to students not receiving such training and that the difference was due to the nature of systematic training and not chance factors.

Finally, the Spearman rank correlation coefficient (rho) was used to investigate the relationship between the level of functioning of student trainers in both responding and discrimination skills and the gain scores demonstrated by their trainees in these same skills after training. A slightly positive correlation (rho = .06) was found for responding skills and a slightly negative correlation (rho = -.126) was found for discrimination skills. The Kendall method for determining significance was used in both cases. This method yielded a $t$ of .38 for responding skills and a $t$ of .78 for discrimination skills. In neither case could the relationship be considered significant: therefore, the null hypotheses of zero correlation between the level of functioning of student trainers in responding and discrimination skills and the gain scores of their trainees in these same skills could not be rejected. The results of this study are summarized in Table 3.5 on page 62.
TABLE 3.5
Summary of Hypotheses and Results Comparing Systematic and Nonsystematic Human Relations Training

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>test</th>
<th>ALPHA</th>
<th>Decision</th>
</tr>
</thead>
<tbody>
<tr>
<td>$H_{01}$</td>
<td>$t$ test</td>
<td>.05</td>
<td>Reject</td>
</tr>
<tr>
<td>$H_{02}$</td>
<td>$t$ test</td>
<td>.05</td>
<td>Reject</td>
</tr>
<tr>
<td>$H_{03}$</td>
<td>$t$ test</td>
<td>.05</td>
<td>Reject</td>
</tr>
<tr>
<td>$H_{04}$</td>
<td>$t$ test</td>
<td>.05</td>
<td>Reject</td>
</tr>
<tr>
<td>$H_{05}$</td>
<td>Spearman rank correlation</td>
<td>.05</td>
<td>Do not reject</td>
</tr>
<tr>
<td>$H_{06}$</td>
<td>Spearman rank correlation</td>
<td>.05</td>
<td>Do not reject</td>
</tr>
</tbody>
</table>
CHAPTER IV

SUMMARY, DISCUSSION, CONCLUSIONS, IMPLICATIONS, AND RECOMMENDATIONS

Summary

Over the past 10 years, an extraordinary growth in college based paraprofessional training programs has been observed (Young et al., 1974). Unfortunately, there has been a dearth of research designed to evaluate the effectiveness of the training methods in these programs during their growth spurt. The present study was conceptualized in response to the need for research dealing directly with training methods in the basic counseling and interviewing skills that can be effectively implemented in associate of arts degree mental health programs.

The purpose of this study was to investigate one possible means of improving the delivery and effectiveness of human relations skills training within a paraprofessional associate of arts degree mental health aide training program. The goals of increased efficiency and specificity were studied in light of limited resources by using second year students as trainers of entering students in human relations skills which is
the core element of paraprofessional training in mental health work.

The present study was accomplished in two major parts. In part one, two training methods for the teaching of human relations skills were compared. In part two, the concept of transferability of human relations skills training from second year students to first year students was studied. Systematic human relations training, as described by Gazda et al. (1973), functioned as an independent variable in both parts of the study. In part one, an alternative nonsystematic teaching approach also functioned as an independent variable. Subjects' performance scores on the two parts (discrimination and responding skills) of the Counseling Skills Evaluation (Wolf, 1976), functioned as the dependent variables in both parts.

Subjects for the study were 123 students enrolled at Lake Superior State College. Their characteristics were similar to the national norms for students enrolled in two-year associate degree mental health programs in terms of age, sex, and educational background (Young et al., 1974).

Statistical analysis of the dependent variables was accomplished through t-test comparisons to test the significance of differences between the two classes in
part one of the study after treatment, as well as to
test the significance of differences between the two
groups in part two of the study after treatment. The
Spearman rank correlation coefficient (rho) technique
was used to evaluate interjudge reliability for the
scoring of part one of the dependent variable. It was
also used to test the relationship between each student
trainer's level of functioning in human relations skills
at the time of training and the trainee's gain in these
same skills after training.

Results indicated that the students receiving sys-
tematic human relations training significantly (P < .001)
increased their level of functioning in both responding
and discrimination skills when compared with students
not receiving systematic skill training. The first year
students trained by second year students also demon-
strated significantly (P < .001) greater gains in both
responding and discrimination skills than a control
group who received no training. No significant rela-
tionship was found, however, between the levels of func-
tioning of the student trainers in responding or discrim-
ination skills and their trainee's gain in these skills.

Discussion

One of the main purposes for the design of this

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study was to investigate the stated hypotheses in a field setting; that is, to conduct the experiment in an on-going two-year paraprofessional associate degree training program. The study was conducted in such a manner as to reduce to an absolute minimum any deviation from the normal procedures of the program. The design was facilitated in so much as the study was performed during the second year of the program's existence and the second year students had no precedents against which to compare their class experiences and requirements.

The results of part one of the study indicated significant differences between two training methods for human relations. The systematic approach appeared to increase the skills measured by the dependent variable to a greater degree than a nonsystematic, more traditional method of teaching. These results must be interpreted cautiously since the design was quasi-experimental, using two intact classes for comparison; the results, none the less, were impressive. An examination of the raw scores (see Appendix E, p. 110) shows that every student in the class receiving systematic human relations training exhibited some improvement in their discrimination skills and virtually all (98%) showed improvement on their responding skills. In comparison, only 39% of the students in the class receiving the
nonsystematic human relations course improved in their discrimination skills and 72% of these students improved in their responding skills. Moreover, on the posttest, all the students in the class that was systematically trained displayed discrimination skills at or above the 70th percentile for the norm group studied by Wolf (1976), while the students in the other class all scored below the 50th percentile for this same norm group. Also, on the posttest, 60% of the students who were in the systematically trained class scored at or above the 3.0 level—the minimally facilitative level as defined by Wolf (1976)—in responding while none of the students in the nonsystematically trained group reached this level. This finding is especially significant in light of the studies which measure professional counselors on the responding scale. For example, Wolf (1976) found a mean score of 2.20 for responding skills of the 35 professional staff members of Springfield State Hospital. This staff included psychiatrists, psychologists, social workers, and psychiatric aides. Wolf also found responding skill scores of 2.31 for 22 drug addiction counselors and 2.10 for 21 alcoholism counselors. Using a different but similar instrument to measure responding skills, Carkhuff (1971) also found a mean score of 2.20 for the responding skills of a group of experienced counselors.
professional counselors who were not systematically trained and a mean score of 3.0 for a systematically trained group of experienced professional counselors. Employing a similar scale to that used in this study, Dendy (1971) found an empathy responding skill score of 2.81 for a group of PhD counselors from Michigan State University.

The results of part two of the study were also very cogent. An examination of the raw scores shows that all of the students trained by second year students exhibited a gain in their discrimination skill scores while 36% of the control group displayed a decrease in these scores. On the posttest, all of those students trained by second year students had discrimination skill scores at or above the 50th percentile and 88% of these students scored above the 70th percentile for the norm group studied by Wolf (1976). The control group, on the other hand, exhibited posttest discrimination scores of which only 20% were above the 50th percentile of this same norm group.

On the posttest, 33% of the students trained by second year students had responding skill scores at or above the minimally effective (3.0) level. Only one of the subjects in the control group was able to reach this level of responding skill scores. An interview with the one student in the control group who scored above the 3.0

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level for responding disclosed that he was concurrently working as a counselor at a transition house for juvenile delinquents and had received several hours of "empathy training" as part of his employer's in-service program.

This further analysis of the data, while not directed at hypothesis testing, does lend strong support to the major conclusions of the study. An examination of the raw data also helps to explain the apparent contradiction between findings summarized by Carkhuff (1971, p. 135) and the findings of this study concerning the relationship between a trainer's level of functioning and the mean gain in level of functioning of his or her trainee. The student trainers' levels of functioning at the time of training were assessed by their scores on the posttest in part one of this study. The posttest scores for this group (Group A) clustered very tightly. While the discrimination skill scores for this group ranged from .60 to .98, 80% of this group's scores ranged between .60 and .76. On the responding skill data, this group had a range of posttest scores of from 2.31 to 3.44, but 80% of these scores were between 2.88 and 3.44. This tight clustering could tend to hide any relationship between the trainers' levels of functioning and the gain scores achieved by the trainees. The studies reported by Carkhuff, on the other hand, were collated so
that an overall range of trainer level of functioning of 1.6 to 4.5 was achieved.

The findings of the present study may mean that when the trainers are functioning at a sufficiently high level in discrimination and responding skills, it is predictable that they will effect positive changes in their trainees but that the amount of change is not predictable. If, for instance, Carkhuff's (1971, p. 135) data is divided into two parts so that the level of trainer functioning is between 1.6 and 3.1 in one group and between 3.3 and 4.5 in the other group, a Spearman rank correlation coefficient of .99 is found for the first group but a correlation coefficient of only .29 is found for the second group. The group consisting of low functioning trainers displays a significant (P < .001) correlation between the trainers' levels of functioning and the trainees' gain scores. The higher functioning group, however, does not display a significant (P > .05) correlation.

The question of what level of trainer functioning the relationship between trainer level of functioning and trainee gain in skills breaks down, remains to be investigated. This question is important because it relates directly to the concept of selection. In the Archer and Kagan (1971) study, as well as in many of the
Carkhuff (1971, 1974) studies, great emphasis was placed on selection procedures for choosing the best of the original group of trainees to be trainers for a second group. These selection procedures were based on the assumption that there is a high correlation between trainer's level of functioning and trainee gain. If it is true that this correlation breaks down after a certain level of functioning has been reached by the trainer, the selection procedures may be unnecessary and unfortunate.

There were several conditions that existed during this study that should be considered in any replication of the study. The professor of the Techniques of Interviewing and Counseling course, who trained the student trainers, was himself functioning at very high levels of discrimination and responding skills. On the Counseling Skills Evaluation, he scored a discrimination skill score of .56 and a responding skill score of 4.1. In any form of education, it is vital that the teachers be well versed in their subject matter. In human relations skills training, it is especially important that the instructor be not only versed, but adept in the skills which he or she is teaching primarily because of the great effect modeling has on this type of training (Bandura, 1969).
As was mentioned earlier, there was a strong continuity between the two counseling courses within the mental health aide program. The same professor taught both courses and the students stayed in the same lab groups. This situation facilitated the effective use of the lab groups during the second course as supportive counseling sessions for the trainers. The facilitative dimensions (e.g. empathy, warmth, and respect) were modeled by the professor and encouraged in the students on an on-going basis during the entire period that the students acted as trainers. It is assumed that this group involvement had some effect on the students' performances as trainers.

Another important factor in the study was the high degree of cooperation between staff members within the program. The training sessions between student trainers and student trainees were treated with respect and encouragement by members of the staff. The instructor for the first year students encouraged these students to volunteer for "a very meaningful and worthwhile experience." Also, several teachers at the college granted credit such as points toward a final grade or the exemption of one class paper or project for involvement in the training project by volunteers. The credit was granted at the end of the term and was given to all students who volunteered regardless of whether they were in
the experimental or control group. Virtually all the students in the first year of the mental health program volunteered for the training and the motivation among these students appeared to be extremely high. The students demonstrated a desire for and response to the training by fellow students that was so great that this training plan has now become a required part of a first year course within the program.

The continuity and cooperation within the program, in conjunction with the institutional support exhibited by the faculty, is considered critical to the success of an approach based on a systematic training model utilizing student trainers.

Conclusions

The findings of this study indicate that systematic human relations training can be an effective method of teaching basic counseling (human relations) skills in a two-year associate of arts degree mental health aide program. The results also indicate that the use of second year students in a two-year associate of arts degree program as trainers of first year students is a viable and effective method of increasing the basic counseling skills of the first year students. A logical extension of this conclusion is that with these increased basic
skills, first year students will be better prepared to reap full benefits from their counseling courses during their second year.

Another, more tenative, conclusion of this study deals with the relationship between trainers and trainees. It appears from the results of the study that when a group of student trainers are functioning at relatively high levels on the discrimination and responding skills, there is little reason to believe a significant relationship exists between the trainer's level of functioning in these skills and the gains the trainer is able to effect in his or her trainee.

Implications for Education

The implications of this study for education lie in the area of paraprofessional associate of arts degree programs and possibly in portions of professional programs designed to train counselors and psychotherapists. Three concerns of these programs are addressed by this study: (a) competency-based training, (b) economy, (c) and motivation. Thompson (1976) has defined competency-based education as being programs that include the following three factors:

1. Emphasis upon skills required in the performance of tasks (in real-life or simulated settings) rather than only knowledge about tasks or attitudes toward them.
2. Emphasis upon skills which are transferable from the training setting to various real-life settings.

3. Predefined educational objectives which specify the measurable results expected from the exercises of these skills.

The approach used and described in this study meets these criteria and is aimed at developing specific skills that have been identified, defined, and operationalized by experts in the field of counseling (Carkhuff, 1971; Carkhuff & Berenson, 1967; Gazda et al., 1973, 1975; Patterson, 1974; Rogers, 1957; Truax & Carkhuff, 1967).

An implication of this study for counselor education, therefore, is that one approach toward building effective competency-based programs can be the use of systematic human relations training.

A concern especially associated with two-year training programs is the efficient or economical use of time. The basic thrust of a paraprofessional counselor training program is to identify the most important basic skills necessary for a person to function as an effective helping agent and then to train students in these skills within a minimum time span. It follows, then, that anything that can increase the quality of specific skill training without adding a new course to the curriculum would be welcomed in a two-year program. The concept of transferability of training addressed in this
study seems to accomplish just that.

By having second year students become actively involved in the training responsibilities of the program, several positive additions accrue to the program. The first year students receive a very meaningful training experience that introduces them to the basic counseling skills and effectively increases their discrimination and responding skills. A closer relationship is built between the first and second year students within the program. This procedure, therefore, adds to the continuity and impact of the overall two-year program. The student trainers become aware that they are already acting as paraprofessionals in a training role and their success in this role serves to bolster their self-confidence as they prepare to leave the campus and go to their field placements. It is also assumed that as the students who were trained by fellow students enter their counseling courses, they will be more skilled than they would be had they received no such training. Carkhuff (1969) has concluded that pretraining abilities are the best predictor of posttraining abilities and that this is especially true in time limited programs. It follows then, that by entering their counseling courses with greater abilities, the students will reap greater benefits from their courses, and increase the quality, not
only of the counseling course, but of the entire mental health aide program.

It should be emphasized that these benefits come to the program without additional courses or staff. The use of students within a two-year associate degree program as paraprofessional trainers, therefore, benefits both the students and the program in a highly economical manner.

Finally, it was observed that the students in this study seemed highly motivated. Interviews conducted with the students at the end of the training revealed some interesting attitudes that have implications for education. Many students told this investigator that the fact that they were actually going to use the skills they were learning to train another student was a major motivating factor in their attempts to do their best. They were aware that their performance as a paraprofessional trainer would be evaluated by the Counseling Skills Evaluation and, perhaps more importantly, by their peers. It is natural for one to want to look good in the eyes of one's peers and the approach of immediately using a newly acquired skill with a peer seems to capitalize on this motivating factor. From the results of the study, it seems fair to assume that the anxiety aroused from being evaluated by peers on their first
attempt as a paraprofessional was not so great as to create an obstacle to the students' performances as trainers. An implication, then, is that by constructing a total training program so that the skills learned during one term will be called upon during the following term in a real-life situation within the program may facilitate a high level of motivation among the students involved.

Implications and Recommendations for Further Research

As in many research studies, the most important implication for further research is the replication of this study. If the findings of this study are duplicated in other settings such as associate of arts degree programs in the inner city, an effective model for teaching human relations skills in paraprofessional associate of arts degree programs will have been identified. Systematic human relations training could then become a criterion against which to measure the new approaches to human relations skills training that are sure to emerge.

Research designed to answer the following questions which have arisen during the execution of the study would be a meaningful contribution to the paraprofessional and professional counselor training literature.
1. Do students who achieved high levels of functioning in the human relations skills during their associate of arts degree program demonstrate high levels of functioning in these same skills one year later in actual counseling relationships with their clients?

2. What effect do paraprofessionals who demonstrate high levels of the human relations skills have on the staffs of the agencies where they are employed?

3. Is the transferability of training approach described in this study applicable to professional counseling and psychotherapy training programs? What would be the effects of such an application?

4. Does the positive relationship between a trainer's level of functioning and his or her trainee's gain score no longer hold when the trainer is functioning at high levels (level 3 or higher) of discrimination and responding skills?

The rapid growth of paraprofessional associate degree programs for mental health workers is a fact. The effectiveness of these programs in reaching their stated goals is still a question. This study is a step toward the development of answers to questions of the effectiveness of basic counseling courses within associate degree mental health aide programs.
REFERENCES


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Odgers, J. C. Cause for concern. Counselor Education and Supervision, 1964, 4, 144-146.


Schlossberg, N. Sub-professionals: To be or not to be. *Counselor Education and Supervision*, 1967, 6, 108-113.


Wolf, S. Counseling for better or worse. Selected papers of the Alcohol and Drug Problems Association of North America, 1972.


APPENDIX A

CURRICULUM FOR
MENTAL HEALTH AID PROGRAM
AT
LAKE SUPERIOR STATE COLLEGE
### 1974-75 CATALOG

**RECOMMENDED CURRICULUM**

#### FIRST YEAR

<table>
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<tr>
<th>FALL</th>
<th>WINTER</th>
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</tr>
</thead>
<tbody>
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Electives 7
INSTRUCTIONS FOR JUDGES

Here is a packet of information regarding the scoring procedure you are about to follow. It was written by Dr. Sidney Wolf and Carol Melvin Wolf. The material is divided into three sections. First, there is a general discussion of the theory behind the test and a rationale for scoring. This section should help you develop the appropriate mind set for the task at hand.

Secondly, there is a section called, "Scales for Measuring Helper Traits." The first scale, "Empathy," is the most important. Very often you can judge on this scale alone. There may be times, however, when you will want to consult the other scales for help in rating a statement. These other scales will be particularly helpful in rating what you feel is a really good response. We will, of course, talk more about these scales and how to use them in our training sessions.

Finally, there is a section entitled, "Selected Counselor Responses, Judges' Comments, and Ratings." This section offers samples of a variety of responses to four client statements. Each example is accompanied by a judges rating and the judge's rationale for the rating. This section should help you understand the scales more clearly. You may want to refer to them as reference points when you are having difficulty judging an item. Please note that
you may use half points in your ratings (i.e. 1.5, 2.5, 3.5 or 4.5).

Scoring the CSE

Part I

Each response from a subject may be evaluated on an over-all measure of helpfulness or on an operationally defined scale of a specific core quality. However, in order to score any response, it is necessary to understand the objectives of helping and how the helping process can lead to the attainment of those objectives. Therefore, the rater must be perceptive, discriminating, and knowledgeable with respect to the research into effective counselors and counseling.

What do people seek from a helping relationship? Many seek relief from painful symptoms; others wish to learn more adaptive and successful ways of living. At deeper levels, individuals hope to find serenity, peace of mind, and freedom from disabling conflicts. Many hunger to find meaning and purpose in life. Still others wish to become more productive and accomplish more of their ambitions. Expanding one's awareness, being more spontaneous, and becoming free from inhibitions are other goals for clients. Learning to be the master of oneself, effective at living, and capable of commitment, intimacy, and genuineness are
crucial issues at the core of life itself. How can people develop the means necessary to reach such heights of personal accomplishment and self-actualization?

Carkhuff, (1967, 1969b), in addressing this question, has suggested that two processes are necessary for one to become more self-actualizing: self-exploration and action. In order for a person to improve he must explore his behavior, thoughts, and feelings as well as how he deals with stress, relates to others, and handles frustrating situations and disappointments. He must learn how to love in the profound sense of the word and discover his purpose in life.

As an individual explores himself, he learns more about his own self-image, his habitual behavior, and the way he interacts with others. As a result, he develops increasing self-awareness. Not only does a person gain insights as a result of self-exploration, but also he discharges pent-up emotions. Feelings associated with traumatic, painful, and personally embarrassing or damaging experiences in his past are relived, and the emotional reservoirs of painful experiences are released, thus producing freedom from the constrictions and conflicts which may have plagued him.

However, knowing the "whys" of one's behavior and experiencing freedom from painful emotions does not necessarily lead towards lasting improvement. The person must do
more than explore himself in order to achieve enduring growth. He must take action. He must experiment with new behaviors and new techniques of living. He must put into operation new methods of reacting to others and dealing with frustrations. He must learn new ways of thinking about himself and others. He must learn more effective techniques for living successfully. He must learn constructive behaviors to replace the former self-defeating, destructive behaviors, a process which requires risk taking.

Numerous studies have revealed significant correlations between depth of self-exploration and criteria of subsequent improvement. That is, clients who probe themselves deeply are more likely to grow. High functioning counselors are able to facilitate both self-exploration and risk-taking in their clients. Thus, they assist their clients to transmute self-defeating, destructive behaviors into growth producing, constructive actions.

Successful counselors and helpers are able to establish the kind of relationship necessary for their clients to "let go" and confront their feelings and problems. The clients, in turn, are able to face themselves and to try to alter what they find to be destructive. Thus, they can work to develop more effective means for living life successfully and to realize more of their own potential.

Each helper response must be evaluated as to its impact
on the client. Will a helper statement tend to evoke deeper exploration? Will the helper response assist the client to understand himself better, to discharge pent-up feelings, to deepen his knowledge of how his behavior affects him, to correlate causes and effects in his life, and to become more self-actualizing?

Any response to Part I of the CSE must be rated on the basis of what it will mean to, and evoke in, the client. In evaluating a response, the judge should constantly ask the following questions:

Does the statement reveal that the helper was able to understand the essence of what the client communicated verbally and non-verbally?

Does the response indicate that the helper was sensitive to the feelings of the client?

Does the helper perceive any of the more covert, hidden communications, the non-verbal messages or the more subtle nature of the communications from the client?

Will the helper response tend to reinforce the client's trust of the counselor, the psychotherapeutic relationship, and the client's own ability to control his life and affairs?

Does the helper perceive discrepancies in the client's communications and confront him when necessary and appropriate?

Does the helper ask for more client exploration and expect him to confront his feelings?

Does the helper communicate his confidence both in the client's ability to resolve his problems and in the helping process to achieve this end?

In the evaluation of specific traits, the evaluator
should use the operationally defined scales designed to measure helper abilities. Some of these scales are provided in another section of this manual. Samples of counselor responses to each of the twelve portrayals, together with ratings and judges' explanations are also included to assist those learning how to score counselor responses.

Scales for Measuring Helper Traits

**Empathy**

**Level 1:** The counselor is not listening. He communicates no awareness of the client's expressed feelings and expressions.

**Level 2:** The counselor responds partly to the client's expressed feelings.

**Level 3:** The counselor expresses essentially the same affect and meaning as the client.

**Level 4:** The counselor adds deeper feelings and meaning and this helps the client to manifest feelings he was unable to share previously.

**Level 5:** The counselor adds significantly to the client's feelings and meaning. He responds with full awareness of who the client is.

**Respect**

**Level 1:** The counselor communicates to the client that his feelings are not worthy of consideration and that he is not capable of acting constructively.

**Level 2:** The counselor responds mechanically and communicates little respect for the client's feelings and potential.

**Level 3:** The counselor communicates regard for the client's
feelings and potential. He is open to see the client deal constructively with his problem.

Level 4: The counselor communicates a very deep respect and caring for the client's feelings and potential. He enables the client to be himself and to experience being valued as an individual.

Level 5: The counselor communicates the very deepest respect for the client's worth as a person and enables him to act most constructively and emerge most fully. The counselor communicates a commitment to the client to do all he can to enable him to actualize his potential.

**Warmth**

Level 1: The counselor is cold, detached, and displays no concern for the client. Neither verbally nor non-verbally does the counselor communicate caring for the helpee. There is no physical contact initiated by the counselor towards the client nor does the counselor respond to any such contacts initiated by the client.

Level 2: The counselor appears detached, genuinely unfeeling and unresponsive to the client. There is virtually no evidence of concern, compassion and caring for the client.

Level 3: The counselor shows some caring and concern by occasional statements indicating positive regard for the client and through non-verbal cues such as firm handshakes and other demonstrable contacts.

Level 4: The counselor either verbally or non-verbally communicates caring and concern for the client. There is indication of positive affect in the counselor's facial expressions, physical touches and verbalizations.

Level 5: The counselor displays affection for the client both verbally and non-verbally. There is physical contact, (e.g. two-handed handshakes, pats on the back, hand-holding during emotional periods). In other ways, the counselor's concern and caring for the client are shown by his compassionate tone of voice, understanding looks,
and non-verbal signs of identification.

**Genuineness**

**Level 1:** The counselor's words are clearly unrelated to his present feelings. He is genuine only when he is negative and destructive.

**Level 2:** The counselor's words are slightly unrelated to his present feelings. He plays a role.

**Level 3:** The counselor appears sincere but not involved.

**Level 4:** The counselor responds with many of his feelings and really means what he says. He is able to employ his responses as a basis for further inquiry into the relationship.

**Level 5:** The counselor appears spontaneous and deeply himself. He is open to all sorts of experiences. The counselor employs the client's hurtful responses constructively to open a further area of inquiry in his relationship with the client.

**Concreteness**

**Level 1:** The counselor allows abstract generalities and makes no attempt to lead the conversation into something specific and relevant.

**Level 2:** The counselor allows personal matters to be dealt with vaguely and does not elicit clarification of most relevant feelings.

**Level 3:** The counselor has the interview centering directly around personal things but not all areas are dealt with concretely.

**Level 4:** The counselor enables the client to fully develop in concrete terms almost all areas of concern.

**Level 5:** The counselor appears always helpful in enabling the client to discuss directly and completely specific feelings and experiences.
Confrontation

Level 1: The counselor disregards all discrepancies in the client that might be fruitful areas for consideration.

Level 2: The counselor remains silent concerning most of the discrepancies.

Level 3: The counselor, while open to the client's discrepancies, does not relate directly and specifically to them.

Level 4: The counselor attends directly and specifically to the discrepancies in the client's behavior and confronts him.

Level 5: The counselor is keenly and continuously attuned to the discrepancies in the client's behavior. He confronts the client with his discrepancies in a sensitive and perceptive manner whenever they appear.

Selected Counselor Responses, Judges' Comments, and Ratings

As an aid to those scoring Part I of the CSE, actual counselor responses to each of the twelve portrayals have been included with Judges' Comments and Ratings. These counselor responses have been selected from counselors and therapists who have taken Part I of the CSE. The counselor statements have been chosen to represent different levels of functioning.

Statement 1

I don't know what to do about my son. He is 16 now. I can't talk to him--can't reach him. It's like he's in
another world. He resents our affluence, the way we dress, our friends, the way we think. You know, when I look at him, eye to eye, my own son, I see hatred.

Selected Counselor Response A: Have you tried talking with your son?

Judges' Comments: This is concrete but it misses the client's affect and the fact that the father had already stated he couldn't communicate with his son.

Rating: 2.0

Selected Counselor Response B: I can tell by your voice and expression how difficult this is for you. Let's talk more about it.

Judges' Comments: Good observations are reflected to the client but the non-specific last statement detracts somewhat.

Rating: 3.0

Selected Counselor Response C: Wow, that must feel overpowering; to think that someone you love and have brought up might hate you and what you stand for.

Judges' Comments: This response is potent, empathic, and sums up the essence of the statement succinctly and graphically.

Rating: 5.0

Selected Counselor Response D: Are you trying to force your values down his throat? Can you let him begin to develop his own sense of what is right for him? Give him the choice of choosing how he wants to live. Let go of him!

Judges' Comments: This judgmental and angry statement is a projection of the counselor's own views. It is advice-giving, directive, and intolerant.

Rating: 1.0

Selected Counselor Response E: Have you contacted any other social agencies? Perhaps if you could find one that offers family counseling, you could go there together.

Judges' Comments: This counselor's attempt at referral with no preparation or initial attempt to understand the
client may leave him feeling abandoned.

Rating: 1.5

Statement 2

I think of you as the best friend a person could ever have. Being with you makes me feel worthwhile. Before these last few months my life was hopeless, empty, but you made it meaningful. You gave me a reason to go on. Without you, I don't know what I'd do.

Selected Counselor Response A: I am glad I can render you this support but I don't want you to place too much emphasis on me. Somewhere along the line you will have to start thinking of being independent without me.

Judges' Comments: This preachy confrontation tends to stop exploration of client dependency rather than facilitate it. It is on the right track by confronting dependence, but it seems too authoritarian.

Rating: 2.5

Selected Counselor Response B: You feel relief at your improvement but you're unsure about maintaining it without my help. You're afraid I might let you down.

Judges' Comments: Although empathic, this response may possibly go a little too far beyond the client with the last counselor statement. If this had been left off, the response would have been more effective.

Rating: 3.5

Selected Counselor Response C: Uh huh!

Judges' Comments: It is probably frightening for the client after exposing herself to receive such a non-committal, cold response. What does it mean? It responds to nothing the client said.

Rating: 1.5

Selected Counselor Response D: Why do you feel your life is hopeless? How do you think it can get better? If you could have your wishes come true, what would they be?
Judges' Comments: This barrage of questions may be confusing. The last statement leads the client away from the relevant issues she has raised.

Rating: 1.5

Selected Counselor Response E: You are feeling elated now that your existence has worth.

Judges' Comments: This statement sounds stilted and responds to only a part of the message in rather vague language. The most important part of the client's communication, fear, is not dealt with.

Rating: 2.0

Statement 3

I lost my job again. My wife said she is going to split. She should have split a long time ago. I'm up to my ass in debt...Everything I touch turns to shit. Last night I went down to the basement and got my gun out. I just sat there staring at it and I thought maybe it would be best to end the whole god-damned thing right then and there.

Selected Counselor Response A: So is it an excuse that you are looking for, or are you looking for a way out by making excuses?

Judges' Comments: This suspicious and punitive statement puts the client down. The counselor's chastizing seems to be an attempt to shame the client.

Rating: 1.0

Selected Counselor Response B: Your job has got you down? Have you talked to any of your supervisors? Things may straighten out.

Judges' Comments: This communicates warmth but it has missed the essential elements of the communication. It is so understated as to be absurd.

Rating: 1.5

Selected Counselor Response C: You were staring at the gun and you say you were going to end the whole damned thing?
Judges' Comments: The therapist emphasizes the client's own words and the most dramatic part of his communication.

Rating: 3.0

Selected Counselor Response D: What stopped you from ending it right then and there?

Judges' Comments: This statement is concrete and relevant. It is likely to precipitate an exploration of the client's desire for life. It may be a little premature, but it is likely to elicit significant material.

Rating: 3.5

Selected Counselor Response E: You feel like everything around you is falling apart. You don't know how to handle all these things and you seem to be looking for a way out, but at the same time this frightens you.

Judges' Comments: Although a little too long, this statement identifies the client's conflict about suicide. It is warmly stated, empathic, and captures the essential feelings and issues.

Rating: 4.0

Statement 4

For weeks I've been spilling my guts - really hurting - trying to get through to you. And there you sit - distant - detached. My God, what do I have to do to get through to you - to make you aware of me? You don't care about me. You don't even hear what I say - I can't make a dent in you. What kind of person are you anyway?

Selected Counselor Response A: It seems as though you're questioning whether or not I care for you. You feel that I don't - this makes you angry.

Judges' Comments: Empathic and potent, this statement suggests a cause for the client's anger.

Rating: 3.5

Selected Counselor Response B: Why don't you answer that question by yourself?
Judges' Comments: This is a not-so-subtle "put down" and probably will evoke more anger in the client.

Rating: 1.5

Selected Counselor Response C: I'm very sorry I upset you but can I have time to establish a better friendship?

Judges' Comments: This apology for upsetting the client indicates that the counselor is on the defensive, and gives the client control. It does not deal directly with the issues involved. It begs the client for "friendship."

Rating: 2.0

Selected Counselor Response D: It angers me that you react this way. I don't understand what you mean by "making a dent" in me. Let's try to understand what's happening between us now.

Judges' Comments: Although this is genuine and self-disclosing, it teaches the client anger begets anger. An attempt is made by the counselor to work it out, but self-disclosure in the face of intense hostility is risky and generally not helpful.

Rating: 2.0

Selected Counselor Response E: Apparently, I'm not meeting your expectations. What are they?

Judges' Comments: This statement does not call attention to the client's feelings. It asks for specifics of material already offered with intensity by the client and will probably elicit a repetition of what has already been said.

Rating: 2.0
LESSON PLAN FOR TRAINING OF FIRST YEAR STUDENT IN HUMAN RELATIONS SKILLS

A good training program must be goal-directed and action-oriented; you must know where you are going and that you are going to get there. Second, a good training program emphasizes practice in the behavior which you wish to affect - you practice what you want to learn. Third, you develop the steps to the goals in successive approximations of the goal - you take small steps toward the goal. Fourth, trainees are left with tangible and usable skills. They can actually use these skills when they are done with the training program. Fifth, the trainers, as well as the trainees, hang on to these learned skills.

Goals: To set up a training program that will enable helpers to increase their level of effectiveness in discriminating good and poor responses, and in responding in a helpful manner. To improve knowledge of self. To improve your ability to relate to other human beings in an effective and helpful manner.

First Session: Introduction

A. This training program will concentrate on training relevant to the development of emotional and interpersonal training, focusing upon helping skills. There are three phases of helping: helpee exploration, helpee understanding, and helpee action. These are the processes leading to the change or gain of the helpee.

B. This training program will last approximately ten
hours and will consist of six sessions of not less than one hour and no more than two hours.

Purpose: To increase your level of effectiveness in discriminating good and poor responses and your ability to respond in a helpful manner as defined by George M. Gazda in his book Human Relations Development.

My role as trainer: I will be introducing situations that will require you to respond in a helpful manner. In other words, we will be participating in many role playing situations. For our session next week, I would like you to read Chapter 6 in your book, Human Relations Development.

Second Session: Discuss and go over Chapter 6. Develop situations that require the use of responses which are not helpful and analyze why they are not helpful. Look over Chapter 3 in The Art of Helping by Carkhuff for our next session.

Third session: Discuss Chapter 3 in The Art of Helping by Carkhuff. Empathy, warmth, respect and their relationship to helping.

Fourth session: Continue with Chapter 3. Develop situations that demonstrate empathy, warmth, and respect. Look over Chapter 8 and Chapter 13 in Human Relations Development for our next session.
Fifth session: Go over and discuss Chapters 8 and 13 on perceiving and responding with empathy. Go over and explain the scale on page 71, go over examples, and use some of the exercises for practice to increase student's ability to discriminate and respond.

Summary

The student will demonstrate his/her ability to respond to a client in a helping manner by short quizzes consisting of helper-helpee situations. Go over the goals and objectives of the training program. Have we achieved our goals and objectives?
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PSYCHOLOGICAL SKILLS DEV. CORP., P.O. Box 6734, Towson, Md.

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APPENDIX E

TABLE OF RAW SCORES OBTAINED FROM THE COUNSELING SKILLS EVALUATION

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