

AN INVESTIGATION OF SELECTED
PREMISES OF CARKHUFF'S THEORY OF
TRAINING PSYCHOLOGICAL HELPERS

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ABSTRACT

AN INVESTIGATION OF SELECTED PREMISES OF CARKHUFF'S THEORY OF TRAINING PSYCHOLOGICAL HELPERS

By

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The purpose of this study was to examine two aspects of Carkhuff's theory concerning the training of psychological helpers. These aspects were: (1) trainees who are rated as subtracting on Carkhuff's Index of Discrimination (D/I) should not be trained to be facilitative helpers but are more appropriately in need of personality reorganization, and (2) trainers who are rated as subtracting on Carkhuff's Index of Communication (C/I) cannot effectively train persons to be more facilitative than themselves.

The subjects of the study were 96 students and 8 group laboratory instructors of Education 200, "The Individual and Society." Ten classes were used; five of them were assigned the experimental treatment and five were assigned to control. Two experimental training conditions were developed within the classes: (1) trainers who were rated as interchangeable or adding on C/I were paired with trainees rated as subtracting on D/I in an attempt to determine if

trainees rated subtracting on D/I could raise their D/I and C/I ratings to interchangeable or adding, and (2) trainers who were rated as subtracting on C/I were paired with trainees rated as subtracting on D/I in an attempt to determine if trainers rated subtracting on C/I could influence the raising of trainee D/I and C/I ratings to interchangeable or adding. The control groups received no training.

Some evidence was found to partially reject the statement that trainees rated subtracting on D/I could not be trained to raise their ratings on D/I or C/I. Four subjects were rated interchangeable or adding on the post-tests, two on D/I and two on C/I. These subjects were trained by persons rated as interchangeable or adding on C/I.

When comparing treatment and control group effects upon trainee D/I and C/I post-minus pre-test ratings, a significant training effect was found. It had the effect of moving the treatment group trainee D/I and C/I ratings significantly closer to interchangeable than the control group trainee D/I and C/I ratings.

Also, some evidence was found that subjects trained by persons rated as subtracting on C/I could raise their D/I ratings to interchangeable. As a group, those subjects trained by persons rated as subtracting on C/I were able to produce two subjects whose post-test ratings on D/I were interchangeable or adding. No trainees of this group received post-test ratings on C/I of interchangeable or

adding. In examining which of the trainer behaviors had effects upon trainee D/I and C/I, a significant difference was found between trainers rated subtracting on C/I and trainers rated interchangeable or adding on C/I. Persons trained by trainers rated interchangeable or adding on C/I had post-test ratings on both D/I and C/I significantly closer to interchangeable than did those who were trained by persons rated subtracting on C/I. Analysis of trainer D/I indicated no significant effect upon either trainee D/I or trainee C/I post-test ratings.

An analysis of the results of the administration of the post-tests of D/I and C/I at three separate times, immediately after training, two weeks after training and four weeks after training, revealed that there was no significant loss of acquired D/I and C/I ratings across the four-week time span.

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This is my page--I think I'll use the first person a lot.

This has been a long and tough journey but it has ended. I have felt this time would never come but it has and I want to acknowledge that I did not reach this point alone. There are many who helped me to share my burden. You should know of these people too. Let me share my thoughts about them.

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CHAPTER I
THE PROBLEM, RATIONALE, AND
RELATED RESEARCH

Need

In recent years, increasing attention has been paid in both professional and popular literature to the implications of the growth of population, the increased density of population in urban areas, and the necessity for expanded psychological services inherent in the concept of community mental health. The interaction of these three trends has generated a manpower shortage in the field of mental health workers. In a special issue of the American Psychologist devoted to "Psychology's Manpower: The Education and Utilization of Psychologists," a noted journalist states that although there may be a surplus of Ph.D. psychologists for industry's quest to promote conspicuous consumption ". . . there is no surplus of psychologists to perform the countless useful tasks that are being left undone" (Loften, 1972). Loften was referring to the manpower shortage in community mental health work.

It would be economically and logically unsound to train the high numbers of Ph.D. or even M.A. trained

professionals to meet mental health needs. Consequently, many alternatives are being proposed and investigated. Entire professional journals have been devoted to the uses of various technologies (APGA, 1970) or increased use of group procedures (APGA, 1971) in an effort to spur efficiency in helping members of society. However, in spite of professional awareness the principal means for coping with the manpower shortage is increasingly becoming the realm of the paraprofessional.

Currently, paraprofessionals are being used in many different settings. They are assisting in crisis-intervention centers, drug education, suicide prevention, draft counseling, contraception and problem pregnancy counseling, homes for runaway children, college dormitories, and in some mental health centers and hospitals.

Paraprofessionals are usually selected from the general population and are not systematically chosen. They generally are considered a randomly selected group; although since many may be volunteers they could be considered a special segment of the population with certain unique characteristics.

Equally as variable as the types of people who are selected for paraprofessional training are the programs to train paraprofessionals. They vary within a wide range of didactic and experiential training. In addition to paraprofessional volunteers, trainers of paraprofessionals also

come from a wide variety of backgrounds and include psychologists, educators, social workers, psychiatrists, ministers and members of the community who are themselves graduates of paraprofessional training programs.

The diverseness of training programs, trainees, and trainers has developed from the pressure of societal needs and the lack of well established models for the selection and training of paraprofessionals. In addition, the efforts of the organizers of many of the new community agencies that provide psychological aid have been directed toward securing physical facilities, recruiting paraprofessionals, and providing some types of training. Little attention has been given by most organizations to investigating the effectiveness of different types of training programs for training paraprofessionals and the premises on which training programs are built, to determining the characteristics that constitute an effective helper or to determining the characteristics that constitute an effective trainer of paraprofessionals. This investigation was designed to provide data to assist trainers to evaluate certain aspects of one of the models for training members of the helping professions.

Purpose

The purpose of this research is to test two aspects of Carkhuff's theory (Carkhuff and Berenson, 1967; Carkhuff, 1969) concerning the training of counselors,

paraprofessionals, or similar people who work in a helping role in some type of mental health program. These are:

1. People who function at a subtracting level when required to discriminate certain affective responses to others have distorted perceptions of the affect of others and cannot be effectively trained to help in a facilitative manner.

Subtracting is defined by Carkhuff as any response that is rated under level three of a five-level Scale of Empathic Understanding (Appendix A). He states that such people are more appropriately in need of therapeutic personality change rather than training. Members of the general public who function at subtracting levels are essentially oblivious to the affect of people with whom they come in contact. It is impossible for people who function at subtracting levels on his Index of Discrimination (D/I) to communicate accurate empathic understanding or to function at above subtracting levels on Index of Communication (C/I). They have an interpersonal level of functioning not unlike that of outpatient neuropsychiatric patients (Carkhuff and Berenson, 1967; Carkhuff, 1969).

2. Trainers who function at subtracting levels on C/I cannot provide sufficient facilitative assistance to enable trainees functioning at subtracting levels of either D/I or C/I to increase their level of facilitative functioning to interchangeable, a minimum level of facilitative functioning

for those who work in helping roles (Carkhuff and Berenson, 1967; Carkhuff, 1969).

Facilitative functioning is one of the primary concepts of Carkhuff's model. He defines this as ". . . that which frees the individual to obtain higher and more personally rewarding levels of intrapersonal and interpersonal functioning" (Carkhuff and Berenson, 1967, p. 6). Only persons who are functioning at a facilitative level, an interchangeable or adding level (i.e., level three or higher on Carkhuff's five-level scale on Index of Communication, C/I), can effectively help persons functioning at subtracting levels on D/I or C/I to achieve higher levels of facilitative functioning. Carkhuff and Berenson further state that only the person functioning at higher levels has the right to be a counselor or therapist, and those who are at low functioning levels have no right to offer themselves as psychological helpers at any level (Carkhuff and Berenson, 1967).

Specifically, during this investigation in order to test Carkhuff's theory of low functioning trainers, a group of trainees rated as functioning at a subtracting level on both D/I and C/I participated in empathy training administered by trainers rated as functioning at an interchangeable or adding level on C/I and by trainers who were rated as functioning at a subtracting level on C/I. The empathy training was designed to raise the trainee's level of ability to discriminate and communicate empathy to at least a level

rated as interchangeable in the helping experience. Interchangeable is that type of response that is rated at level three on his five level scale which is used in quantifying affective aspects of the helping relationship and is the minimal level for facilitative functioning by a counselor or therapist. In addition, the acquisition and retention of empathy skills were assessed at different time intervals.

Definition of Terms

Client: A person who comes to a counselor or psychologist. This term is used interchangeably in this study with helpee and trainee.

Counselor: A person who provides the necessary facilitative interaction and listening to enable the client to work on a solution to the problem with which he is faced. This term is used interchangeably in this study with helper, leader, therapist, trainer, and practicum supervisor.

Counseling relationship: This term refers to the relationship which is established between a counselor and a client. This term is used interchangeably with therapeutic relationship and helping relationship.

Facilitative: This term refers to ". . . that which frees the individual to attain higher and more personally rewarding levels of intrapersonal and interpersonal functioning" (Carkhuff and Berenson, 1967, p. 6).

Empathic understanding: This term refers to the ability of the counselor to accurately discriminate and communicate the underlying feelings of the client.

To sense the client's private world as if it were your own, but without ever losing the "as if" quality--this is empathy, and this seems to be essential to therapy. To sense the client's anger, fear or confusion as if it were your own, yet without your own anger, fear, or confusion getting bound up in it, is the condition we are endeavoring to describe. When the client's world is this clear to the therapist, and he moves about it freely, then he can both communicate his understanding of what is clearly known to the client and can also voice meanings in the client's experience of which the client is scarcely aware (Rogers, 1957, p. 99). See Appendix A for scale.

Respect or positive regard: The counselor's ability to communicate a warm nonpossessive acceptance of each aspect of the client's experience as being part of that client with no conditions to the acceptance. It means "prizing" the person.

It involves as much feeling of acceptance for the client's expression of negative, "bad," painful, fearful, defensive, abnormal feelings as for his expressions of "good," positive, mature, confident, social feelings, as much acceptance of ways in which he is inconsistent as of ways in which he is consistent. It means a caring for the client, but not in a possessive way or in such a way as simply to satisfy the therapist's own needs. It means a caring for the client as a separate person, with permission to have his own feelings, his own experiences (Rogers, 1957, p. 98).

Facilitative genuineness: The counselor is congruent, authentic, integrated. It is a deep and true response and not superficial. It shows the realness and transparency of the counselor. The counselor is what he is with no

fronts or facades. He is open with the feelings and attitudes within himself.

By this we mean that the feelings of the counselor are available to him, available to his awareness, that he is able to live these feelings, be them in the relationship, and able to communicate them if appropriate. It means that he comes into a direct personal encounter with his client, meeting him on a person-to-person basis. It means that he is being himself, not denying himself. No one fully achieves this condition, yet the more the therapist is able to listen acceptantly to what is going on within himself, and the more he is able to be the complexity of his feelings without fear, the higher the degree of his congruence (Rogers, 1962, p. 417).

Index of Discrimination: The ability of a person to perceive differences in the emotional content of another person's communication. Carkhuff has developed an instrument for assessing this ability. Also abbreviated in this study by D/I.

Index of Communication: The ability of a person to accurately and completely convey to the other person what emotional messages the other person is expressing. Also abbreviated in this study by C/I. Carkhuff has developed an instrument for assessing this ability.

Subtracting: Any rating assigned to a helper response that falls below level three on Carkhuff's five-level scale. A subtracting response takes away from or diminishes what the person has said. It may miss the feeling altogether, or it may minimize what has been said. It has the effect of making it more difficult for the other person to continue. See Appendix A for the five-level scale.

Interchangeable or equaling: A rating that falls at level three on Carkhuff's five-level scale. An interchangeable or equaling response restates that the person has said; it conveys an accurate understanding of what has been said. It does not take away, but neither does it add anything to the interaction. This level of response is considered the minimum functioning level of empathy one must reach in order to be helpful.

Adding: Any rating assigned to a helper response that falls above level three on Carkhuff's five-level scale. An adding response not only conveys that the listener has accurately perceived the feeling but also restates the feeling in a way that expresses it more specifically, more clearly, or in more depth. It has the effect of making it easier to continue.

Hypotheses

It is hypothesized that:

1. Trainees who are rated as functioning at a subtracting level when discriminating affect responses can be trained to discriminate and communicate affect at an interchangeable level.
2. Trainers, who themselves are rated as functioning at a subtracting level of communicating affect, are capable of training persons to raise their rated level of functioning to interchangeable or better when making D/I and C/I responses.

Theory and Supportive Literature

A great deal of recent research has indicated the importance of a central core of facilitative conditions which is presumed to be present in all effective interpersonal helping relationships. This research has focused on the helper's ability to:

1. discriminate and communicate empathic understanding;
2. communicate unconditional positive regard; and
3. communicate his own congruence, authenticity, non-defensiveness, maturity, and integration to the client.

The following review of literature will cover some of the major theorists and their research results which substantiate the importance of helper facilitative characteristics and their relevance in the development of training programs for helpers.

A prerequisite to developing new and more effective methods of training members of the helping professions is an analysis of the helping role into its component parts or its core conditions. Carl Rogers was one of the early pioneers in analyzing and defining the core components of the facilitative helping relationships.

Rogers (1957), drawing from experience, presented a theoretical framework in which he hypothesized three basic characteristics of the counselor. These, he said, should be present in all effective counseling relationships. They are (1) empathic understanding; (2) unconditional

positive regard of the client; and (3) genuineness in the relationship.

Rogers' 1957 statement generated a great deal of research which tended to support it. Halkides conducted one of the first research studies of Rogers' hypotheses. His study indicated a significant positive correlation between each of the three conditions presented by the counselor and constructive personality change, or gain, in the client. Later, Barrett-Lennard developed an instrument to measure the client's perception of the three conditions offered by the counselor and also found a significant positive relationship (in Foulds, 1967).

Rogers (1962) presented the following findings based on his research and theorizing.

1. The counselor has more influence in the therapeutic relationship than the client does in setting the level of therapeutic conditions offered.

2. When clients perceive the conditions early in the therapeutic relationship, greater change is demonstrated.

3. There is an inverse relationship between the client's contact with reality (client's ability to perceive the counselor-offered therapeutic conditions) and positive client personality change.

4. Throughout the helping session(s) the therapeutic conditions offered to each client by the counselor are consistent.

5. There seems to be a positive relationship between the level of the counselor-offered therapeutic triad and constructive personality change.

6. There is a positive relationship between counselor experience and successful communication of the therapeutic triad to the client.

The results of Rogers' research stimulated still further research into the dimensions of a helping or therapeutic relationship. One man influenced by Rogers was Charles Truax. Truax worked with Rogers on the Wisconsin Project which ended in the early 1960's. He developed scales which quantified the three therapeutic counselor-offered conditions developed by Rogers. In addition, several other scales were developed. One of these was a scale of client self-exploration. Truax (1961) investigated the relationship between the "therapeutic relationship" and the degree of client self-exploration and found a positive significant relationship. He (1963) also reported significant positive correlations between the three basic counselor-offered conditions hypothesized by Rogers and constructive personality change in the client.

One of the most prolific and influential theorists active in measuring the core conditions of a helping relationship and their effects on counseling and counselor training is Robert Carkhuff. Originally, Carkhuff derived the basis for his scales for assessment of interpersonal

functioning (1969) from his early work with Truax. Carkhuff (1969) further refined Truax's scales to scales of five levels rather than the nine or ten level scales of Truax. He also developed additional scales and expanded the number of scales to seven. They are: (1) empathic understanding (E); (2) the communication of respect; (3) personally relevant concreteness of specificity of expression; (4) facilitative genuineness; (5) facilitative self-disclosure; (6) confrontation; and (7) immediacy of relationship. He proceeded to document the efficacy of these scales for various populations including professional and nonprofessional helpers. Among the groups tested were: outpatients (Pagell, Carkhuff, and Berenson, 1967); general public (Martin and Carkhuff, 1967); lay helpers (Pierce, Carkhuff, and Berenson, 1967); college freshmen (Carkhuff, Piaget, and Pierce, 1967); college dormitory counselors (Berenson, Carkhuff, and Myrus, 1966); upper class students (education majors) (Kratochvil, Aspy, and Carkhuff, 1967); upper class students (juniors and seniors) (Holder, Carkhuff, and Berenson, 1967); upper class students (juniors and seniors) (Piaget, Berenson, and Carkhuff, 1967); college seniors (psychology majors) (Carkhuff, Piaget, and Pierce, 1967); best friends (college) (Martin, Carkhuff, and Berenson, 1966); graduate students (psychology) (Carkhuff, Piaget, and Pierce, 1967); teachers (in classroom) (Carkhuff, 1969); high school guidance counselors (Martin and Carkhuff, 1967); experienced counselors and

therapists (Carkhuff, 1969). All of these studies, without exception, tended to support the efficacy not only of Carkhuff's scales but also his two instruments, Index of Communication and Index of Discrimination, for assessing the level of functioning of the persons tested.

Truax and Carkhuff discovered an inverse relationship between levels of the three therapeutic conditions offered and the anxiety levels of the clients. In addition, they (1964, 1965a, 1965b) discovered in a series of studies that: (1) client self-expectations and client constructive personality change were positively correlated; (2) genuineness in counselor and client self-exploration are positively correlated; and (3) client self-exploration and the two therapeutic variables, empathic understanding and positive regard, are negatively correlated in seriously disturbed clients. Truax, Turnell, and Wargo, and Truax, Leslie, Smith, Glenn, and Fisher in a series of experiments found a positive relationship between perceived therapeutic conditions and constructive personality change in clients who are not seriously disturbed (in Foulds, 1967).

The Training of Helpers

The therapeutic triad, as was indicated by the above research, is now accepted by many counselors and therapists as necessary and sufficient for those who provide assistance in a therapeutic relationship. It has also been stated by

a number of current researchers that the therapeutic triad should also be stressed in the training of helpers at any level, professional or paraprofessional.

To show there is little if any difference between those considered professionally trained and those lay people who are given minimal training, Carkhuff and Truax (1965b) showed that there was no marked difference in the ability to provide the core therapeutic conditions between lay and hospital personnel and postgraduate clinical psychology students after both had been given a training program of less than one hundred hours. Carkhuff and Truax (1965a) in a similar program reported that lay counselors could provide high levels of the therapeutic conditions. Berenson, Carkhuff, and Myrus (1966) demonstrated similar results with volunteer college students. In an attempt to demonstrate marked effect of helper trainers, Carkhuff, Kratachvil, and Friel (1968), Anthony and Carkhuff (1969), and Pierce (1969) discovered that counselor-trainees tended to move the level of their ability to provide the therapeutic conditions toward the place on the Carkhuff scales where their professors and/or counseling supervisors had scored.

Once trained, a person apparently can retain the helping skills that were learned. Holder (1969) discovered that after exposing student nurses to five, ten, and fifteen hours of training which involved the shaping of trainee

responses, that all three groups gained significantly. After a one and two month follow-up, post-testing indicated that they maintained their level of ability to provide empathic understanding. Two instruments, Index of Discrimination and Index of Communication, were used to assess the helpers' level for empathic understanding.

In order to assess gains and retention in the communication and discrimination of empathy in other training programs, Carkhuff's instruments can be used. The Carkhuff instruments can be administered orally or the testees can write their answers. Antonizzo (1968) noted that while written responses in empathy training were significantly and positively related to oral responses, written responses tended to have a depressed ceiling.

The Factor Analytic Basis
for a Common Factor--
Empathic Understanding

Rogers (1957) proposed three necessary and sufficient conditions for effective counseling, and Carkhuff (1969) proposed seven relevant areas while citing research on at least six others. It would be possible to become hopelessly mired in an increasing number of helper dimensions which would increase the complexity of training programs if it was not for recent factor analytic research on the helper dimensions. This research has important implications for

counselor training as it would be most helpful to concentrate and train on a single helper dimension rather than many.

Muhlberg, Pierce, and Drasgow (1969), using tape recordings of the counseling of three therapists, factor analyzed the recordings on empathy, respect, concreteness, genuineness, and self-disclosure. Using Carkhuff's scales on the items, one therapist was rated as high, one was rated as moderate and one was rated as low on their ability to provide the items in therapy. The correlation matrixes of each of the three therapists indicated one principal factor responsible for most of the variance. Other research by Berenson, Friel, and Mitchell (1969) yielded similar results.

Although the factor analytic studies do not point to which factor is central, theorists have tended to favor empathic understanding as the one most efficacious. Bergin (1966) states, ". . . there is evidence to suggest that this mode of communicating empathic understanding appears to be of the greatest potentially demonstrable efficacy." If Bergin is correct it would seem the scale of empathic understanding is representative of core facilitative conditions and, therefore, the one to be most emphasized in training programs for helpers.

Effects of High and Low Level Trainers

An inherent purpose of Truax, and later Carkhuff, in developing the scales was their use in the training of helpers. Carkhuff's research with the scales has led him to the conclusion that the best indices of a person's ability to discriminate and communicate empathic understanding is through actual experiential testing of these abilities (Carkhuff, 1969). From his statements of assessing abilities, came a further statement that whether professional or paraprofessional, ". . . the core of training in the helping professions should include training in helping" (Carkhuff, 1969). Although apparently redundant, Carkhuff seems to be pointing to the fact that the most efficient and expedient method of training helpers is to put them through a carefully designed program of behavior modification. This, in several programs for training paraprofessionals across the country, has included various combinations of role playing, modeling, reinforcement of successive approximations and counter-conditioning by critical incidents.

As a result of his work in training members of the helping profession, Carkhuff has developed a series of propositions for the training of helpers. Many of the important propositions seem to revolve around the level of the trainer and the level of the trainee and the relationships of these

levels as rated by the Carkhuff scales. Two of these propositions will be investigated in this study.

Summary and Overview

From the above review of current literature, several conclusions can be extracted. They are:

1. The therapeutic triad is a function in the outcome of any successful therapeutic helping relationship.
2. Counselors are consistent in the level of the therapeutic conditions they offer clients.
3. Instruments were developed (Carkhuff, 1969) which have been successfully employed in rating offered therapeutic levels.
4. Judges are able to reliably rate the instruments.
5. The counselor is the one who determines the level of therapeutic conditions in the interaction.
6. A positive correlation exists between therapeutic conditions and client self-exploration.
7. Empathy seems to be representative of the core conditions.
8. The ability to provide empathic understanding can be learned.
9. Relatively brief training programs which focus on the ability to provide high levels of therapeutic conditions can produce persons who are relatively effective in establishing facilitative interpersonal relationships.

10. The direction and degree to which trainees move is directly related to the level of the trainers to provide the therapeutic conditions.

11. The acquisition of the skill to display empathic understanding seems to be a lasting skill.

A number of counseling theorists including Carkhuff (1969) state that empathy is a critically necessary concomitant to any helping situation, and that this ability to be empathic can be learned. However, Carkhuff indicates that only certain types of individuals can profit from training. The behaviors of helping can be taught and assessed by behavioral methods. The training and assessing methods for empathy training have been established and utilized by Carkhuff to train and assess members of the helping professions.

Important to this study is an answer to the question of what types and levels of entry behaviors (discrimination and communication of empathy) are needed by trainers and trainees to make the training process efficient and effective in producing facilitative empathic persons.

In the above chapter the need and purpose as well as the theory and research have been presented. In Chapter II the research design will be presented. In Chapter III the results will be reviewed, and in Chapter IV discussion of the results will take place.

CHAPTER II

EXPERIMENTAL DESIGN AND METHODOLOGY

The following experiment was designed to test the ability of persons rated as subtracting on Index of Discrimination on Carkhuff's Scale of Empathic Understanding (E) to raise their discrimination and communication of empathy to interchangeable or better. These persons will be trained by persons rated as interchangeable or adding on (E). It was also designed to test the ability of trainers rated as subtracting on communication of empathic understanding to train persons rated as subtracting in their ability to discriminate (D/I) and communicate (C/I) empathy, to function at a level of interchangeable or better. The design, subjects, trainers, procedures, treatments, measures and rating process, and testable hypotheses are described in this chapter.

General Description of Design

Ten Education 200 classes at Michigan State University were divided into two groups. Leaders for five of the groups volunteered to participate in the experimental training procedure. The remaining volunteered to be leaders of

control groups. Five groups were designated experimental and five groups were designated control. The Carkhuff Communication and Discrimination instruments were administered to all ten groups. After the administration of the instruments, the experimental groups were given ten hours of empathy training. Two sessions of two and one-half hours were provided each week for three and one-half weeks. The control groups did not receive empathy training. At the conclusion of the administration of empathy training, the Carkhuff Communication and Discrimination instruments were administered to three experimental and two control groups to assess acquisition of empathic skills. Two weeks after the cessation of empathy training, one more experimental and one more control group were given the Carkhuff Communication and Discrimination instruments to measure acquisition and retention. Four weeks after the empathy training, the instruments were administered to the last experimental and the last two control groups to assess acquisition and retention of empathic skills. The design with trainers and numbers of trainees and post-testing times is diagrammed in Table 2.1.

Subjects

The population from which the sample was drawn consisted of undergraduate students at Michigan State University enrolled for Education 200, "The Individual and Society," a

Table 2.1. Design of empathy training experiment on Education 200, summer term, 1969 showing leaders D/I ratings, number of students, and post-test times of both Experimental and Control groups.

	group leader C/I rating	number of S's	post-testing time
experimental groups	1 subtracting*	8	1
	2 interchangeable/ adding	16	1
	3 subtracting	11	1
	4 subtracting	7	2
	5 interchangeable/ adding	10	3
control groups	1 subtracting**	6	1
	2 subtracting	6	1
	3 subtracting*	8	2
	4 subtracting	8	3
	5 subtracting**	16	3

Note: Time one post-tests were administered immediately after training, time two post-tests were administered two weeks after training, time three post-tests were administered four weeks after training.
* and ** indicate that these persons led two groups.

basic required course for all students interested in acquiring a teaching certificate. The course content as described by the college catalog covers major psychological factors in the school learning-teaching situation; concepts in human development related to problems in the school situation; teacher's role in motivation, conceptual learning, problem solving, and the development of emotional behavior, attitudes

and values; learning of skills; retention and transfer; and measurement of student abilities and achievement. The course is taught in lecture, lab classes and in a series of carrel lessons programmed on audio tape and film loops. As one of the goals of the laboratory section is to develop more empathic skills and because college students, and young adults in general, are called upon and volunteer to become paraprofessionals, the population chosen was considered appropriate for this study.

The sample was taken in the summer term, 1971. It consisted of 39 males and 101 females. The age range was 18 to 42 with a mode of 20 and an arithmetic mean of 21.5. The mean was slightly elevated above the other three terms of the academic year because summer term is a time when older students return to the campus. As a group, with few exceptions, they had very little actual empathy training, T-group or encounter group work.

The major area(s) of study in which they were enrolled as reported by them were Physical Education (6 Ss), Music (6 Ss), Human Education (3 Ss), Child Development (4 Ss), Music Therapy (2 Ss), Special Education (17 Ss), Business Education (6 Ss), Art (8 Ss), Agriculture (3 Ss), Secondary Education (2 Ss), Speech (3 Ss), English (8 Ss), Mathematics (11 Ss), History (3 Ss), Audiology (3 Ss), Elementary Education (16 Ss), Engineering (1 S), Home Economics (9 Ss), Psychology (2 Ss), Sciences (8 Ss),

Social Science (5 Ss), Foreign Language (3 Ss), Advertising (1 S), Industrial Arts (2 Ss), Theater (1 S), and No Preference (2 Ss). The college(s) in which they were enrolled as reported by them were Education (94 Ss), Justin Morrill (7 Ss), Arts and Letters (16 Ss), Engineering (1 S), Natural Science (12 Ss), Social Science (5 Ss), Agriculture (2 Ss), Lyman Briggs (2 Ss), Communications (2 Ss), and Human Ecology (4 Ss).

Trainers

The leaders of the laboratory sections of Education 200 were experienced group leaders. All had led the Education 200 laboratory sections for at least the previous three terms. Each had a minimum of 100 hours group leadership experience. In addition, several had training in T-groups and encounter groups. All were graduate students. Seven reported a major in curriculum in the College of Education, and one reported a major in Art. Initially, the trainers were selected by the Education 200 faculty to meet their own criteria which included their being empathic and knowledgeable of human relations. The Education 200 faculty made their assessments of the leaders' capabilities upon the basis of discussion and interviews with the leaders. Carkhuff (1969) states that trainers should be experienced in the relevant areas and should have demonstrated a level of expertise in the relevant areas. The Education 200

leaders appeared to meet these criteria. During the experiment, they were rated on their discrimination and communication of empathy along with the trainees.

Training

The training procedure is explained in Appendix B. It is similar to training programs originated by Carkhuff. Dr. Richard Pierce, a colleague of Carkhuff, had considerable input into the development and design of this training procedure which has been used successfully in a crisis-intervention center in East Lansing, Michigan for about three years.

The first training session administered to the experimental groups differed from that explained in Appendix B. The first session proceeded as follows: With the training group assembled, a helpee (group member) presented a real, personal problem. When the leader felt an empathic response could be given to the helpee's statement, the leader instructed each member of the training group to write down what each considered to be an empathic response. Then each read aloud his response. The trainer responded last in order to avoid influencing group responses. After all responses were read, a discussion about which were the most effective responses was then led by the leader. This procedure was repeated during the first hour and one-half session only. The purpose for this deviation from the

training paradigm was to develop within the trainees the concept of what constitutes an adequate empathic response.

Measures

As this experiment was designed to investigate selected premises of Carkhuff's model, the instruments designed by Carkhuff, Index of Discrimination (D/I) and Index of Communication (C/I), were used. The communication instrument is composed of 16 high-affect statements to which the person is to reply in an empathic, facilitative way. The discrimination instrument uses the same 16 high-affect statements but adds four helper responses to each one. The person rates the responses on the dimension of empathic facilitativeness. The instruments are shown in Appendix C. The results of the administration of C/I were rated by a pair of trained and experienced raters. By previous experiments it was established their inter-rater reliability was .78 as calculated by the Pearson Product-Moment Correlation method. The raters were trained by Dr. Richard Pierce, one of Carkhuff's associates. Rating was done according to the Carkhuff scale number one, "Empathic Understanding in Interpersonal Process, A Scale of Measure" (Carkhuff, 1969).

The ratings of the two independent raters were averaged to arrive at a single rating for the pre-test of communication and a single rating for the post-test of communication. Thus each of the 96 subjects received an

averaged rating for each of the pre-tests and post-tests of communication. The same averaging procedure was used for the Index of Discrimination. Each trainee made 32 responses on both the pre-test and the post-tests of discrimination. These 32 responses were averaged. Thus each of the 96 subjects received one averaged rating for Index of Discrimination on both the pre-tests and the post-tests.

Carkhuff (1969, p. 124) established immutable expert ratings for the helper responses to the sixteen helpee stimulus expressions found in the discrimination instrument. In his discussion of the factor analytic study of the communication instrument (Carkhuff, 1969), he concluded that for the 16-item instrument the same factor is measured 16 times. The reliability and validity of the communication instrument seems to depend upon the expertise of the raters involved and not so much upon the instrument per se. The rating scale is given in Appendix A.

Procedure

Before training started, experimental group leaders were given the instructions for empathy training. See Appendix B. Also before training started, all members, including group leaders of the ten groups, were given a randomly selected 50% sample of the items in Carkhuff's two instruments. The first two empathy training sessions of each trainer were observed by an experienced empathy trainer

and corrective feedback was administered when deviations from the procedure were observed. Empathy training was continued with two one and one-half hour sessions per week until ten hours of training were reached. The groups were randomly observed.

At the end of ten hours of empathy training, the second randomly selected halves of D/I and C/I were administered to one half of the groups, three experimental and two control. Although not tested as a hypothesis, ratings of not only acquisition but also retention were studied in the event that results of the study indicate that empathy training efficiency degenerates over time. For this reason, the second randomly selected halves of D/I and C/I were administered two weeks after cessation of training to one experimental and one control group and four weeks after cessation of training to one experimental and two control groups to measure retention.

Hypotheses

In order to determine the differential effects that trainers' discrimination and communication of empathy would have on trainees' discrimination and communication of empathy and in order to determine if trainees who were rated as subtracting on D/I could have their D/I or C/I ratings raised to interchangeable or adding through a training

program and not by counseling or therapy, the following hypotheses were formulated.

Ho₁: For all trainees administered empathy training who are rated as subtracting on D/I, there will be no significant increase to interchangeable in their ratings on D/I or C/I after training when the trainer is rated interchangeable or adding on C/I.

Ho₂: For all trainees administered empathy training, there will be no significant increase to interchangeable in their ratings either on D/I or on C/I after training when the trainer is rated as subtracting on C/I.

Ho₃: For all control subjects, there will be no increase in their D/I and C/I ratings to interchangeable following participation in groups that receive no empathy training.

Treatments

In order to test the hypotheses stated above, three treatments were devised. A description of these treatments follows.

T₁: Empathy training was administered to a group of trainees rated as subtracting on D/I which was led by a trainer rated as interchangeable or adding on C/I.

Rationale: This grouping of persons was effected to test Carkhuff's (Carkhuff and Berenson, 1967) proposition that persons rated as subtracting on D/I cannot appreciably



profit from training. They are more appropriately in need of personality reorganization.

T₂: Empathy training was administered to a group of trainees rated as subtracting on D/I which was led by a trainer rated as subtracting in C/I.

Rationale: This grouping of persons was effected to test Carkhuff's (Carkhuff and Berenson, 1967) proposition that trainees cannot be trained to function at a facilitative level (above subtracting) higher than that of the trainer.

T₃: Control group.

Rationale: This grouping of persons was effected to check the effect of empathy training.

Control

Control groups were led by leaders who did not employ the above empathy training procedures.

Summary

In order to test the statements made by Carkhuff (Carkhuff and Berenson, 1967) concerning the inability of people to effectively train and/or be trained in empathy if they are rated as subtracting on his scales, a behavioral experimental training method was employed with one-half of the laboratory sections of Education 200 summer 1971 classes. The other one-half of the classes did not receive the treatment and were used as a control.

Group assignment, acquisition after ten hours of empathy training, retention two weeks after training, and retention four weeks after training tests were accomplished by the use of Carkhuff's Discrimination and Communication instruments. The results were analyzed by employing multivariate analysis of variance with significance set at $\alpha = .05$. The results are discussed in Chapter III, and in Chapter IV conclusions are discussed.

CHAPTER III

ANALYSIS OF RESULTS

The analysis of the data in this study will focus first on the data relevant to the hypotheses stated in Chapter II. This will be followed by a consideration of other data found in the course of the study. Statistical analyses were calculated at the Michigan State University Computer Center on the Control Data 3600 Computer System using a multivariate analysis of variance program developed by Finn (1967).

Reliability of Judges

The investigation was designed to test two aspects of Carkhuff's theory (Carkhuff and Berenson, 1967; Carkhuff, 1965) for training counselors, therapists, paraprofessionals, and other personnel who provide assistance to others in some type of a mental health program. Specifically, the study was designed to test: (1) if subjects who were rated as subtracting on the Carkhuff instrument, Index of Discrimination (D/I), could be trained to be facilitative helpers; and (2) if subjects who are trained by trainers who are rated subtracting on the Carkhuff instrument, Index of

Communication (C/I), could be trained to be facilitative helpers. Since all measures for the assessment of the ability to discriminate and communicate empathy involved ratings of subjects and trainers, an acceptable level of interjudge reliability for the ratings was crucial if the analysis of the results was to be meaningful.

The ratings of the two judges who independently rated the responses of the subjects and trainers on the Index of Communication are shown in Appendix E. A product-moment coefficient was computed to determine interjudge reliability for the pair of judges, and the computation yielded a coefficient of .6973 or .70. A review of other investigations (Carkhuff, 1969; Foulds, 1967) using the same or highly similar research scales for assessing facilitative helping conditions has suggested that a reliability coefficient of .50 would be an absolute minimum acceptable level of interjudge reliability. Although some of the studies had interjudge reliability coefficients of .90 or better, the reliability coefficient of .70 for interjudge reliability for rating the Index of Communication was considered adequate for this study.

Tests of Hypotheses

The original design of the study called for one group of subjects, who were rated as subtracting on D/I and C/I, to receive empathy training conducted by trainers rated as being facilitative at a level of interchangeable or

adding on the same two measures. Another similar group of subjects would receive the same training conducted by trainers rated as subtracting on C/I and, therefore, were considered nonfacilitative trainers. These experimental groups would be compared with two control groups that received no empathy training. One control group would be led by trainers rated as being facilitative at a level of interchangeable or adding on C/I, and the other control group would be led by trainers rated as subtracting on the same measure. Unfortunately, no trainers for the control group were rated as functioning at a level rated as interchangeable or adding on the Carkhuff instrument, Index of Communication (C/I). It was, therefore, inappropriate to utilize statistical procedures in making comparisons between experimental and control groups in terms of the effects of empathy training on different types of subjects when conducted by trainers functioning at different levels of facilitation. This type of difficulty in carrying out an experimental design often occurs when conducting research in a real life environment such as the college classes from which the subjects and trainers for this study were drawn. A procedure was selected, therefore, which was not a part of the original design to determine, insofar as possible, the effects of the empathy training program on subjects rated at being at different facilitative levels in human interaction.

Hypothesis 1

The hypothesis developed to test one aspect of Carkhuff's theory of training is as follows: For all persons administered empathy training who are rated as subtracting on Index of Discrimination there will be no increase to interchangeable in their ratings on Index of Discrimination (D/I) and Index of Communication (C/I) after training when the trainer is rated at interchangeable or adding on C/I.

Tables 3.1 and 3.2 show the frequency of experimental and control subjects' ratings on pre and post-tests on D/I and C/I. Subjects have been grouped according to their rating on D/I and C/I. As mentioned above, Table 3.2 shows that no subjects in the control group had trainers rated as being interchangeable or adding on C/I. All 44 subjects in the control group had trainers who were rated as subtracting on C/I.

Table 3.1 indicates that two subjects of the experimental group, who were rated as functioning at a subtracting level on the pre-test of D/I and who received training conducted by trainers who were rated as functioning at an interchangeable or adding level on C/I, attained ratings on the post-test of D/I which placed them at the facilitative level of interchangeable or adding. Two of the subjects of the experimental group, who were rated as functioning at a subtracting level on the pre-test of C/I and who received

Table 3.1. The frequency of experimental subjects' ratings on pre and post-tests of Indices of Discrimination and Communication by level of facilitation.

test	subject ratings			
	Index of Discrimination		Index of Communication	
	subtract- ing	interchange- able or adding	subtract- ing	interchange- able or adding
pre-test	26	0	26	0
post-test	24	2	24	2

Note: The subjects were trained by persons rated interchangeable or adding on Index of Communication.

Table 3.2 The frequency of control subjects' ratings on pre and post-tests of Indices of Discrimination and Communication by level of facilitation.

test	subject ratings			
	Index of Discrimination		Index of Communication	
	subtract- ing	interchange- able or adding	subtract- ing	interchange- able or adding
pre-test	0	0	0	0
post-test	0	0	0	0

Note: No subjects were led by persons rated interchangeable or adding on Index of Communication.

training conducted by trainers who were rated as functioning at an interchangeable or adding level on C/I, attained a level of interchangeable or adding on the post-test of C/I. It should be noted, however, that the persons who received interchangeable ratings on the post-test of D/I were not the same persons who received post-test C/I ratings of interchangeable or adding. Table 3.2 shows that there were no trainers rated interchangeable or adding on C/I; therefore, no trainees were assigned to this category of trainer in the control group.

The data contained in Tables 3.1 and 3.2 indicate that hypothesis 1 must be partially rejected. Two subjects attained ratings of interchangeable or adding on the post-test of D/I, and two attained ratings of interchangeable or adding on the post-test of C/I when trained by persons functioning at interchangeable or adding on C/I.

The effects of the experimental treatment did produce only a small number of subjects who received higher ratings on the post-test of D/I when compared with their pre-test ratings. Two of the subjects attained ratings of interchangeable or adding on post-tests of C/I. While hypothesis 1 must be partially rejected on the basis of the data in Table 3.1, these data also suggest that the effects of the training program were not powerful enough to provide an adequate test of hypothesis 1.

A question of related interest to hypothesis 1 is that of the effect of the training program itself. Does the training program have an effect upon the trainee's Index of Discrimination (D/I) and Index of Communication (C/I) ratings regardless of the trainer-offered level of discrimination or communication? A partial answer to this question can be found in the average change of ratings from pre-test to post-test on D/I and C/I for the experimental and control groups. This data is shown in Table 3.3.

Table 3.3. Mean change of ratings on Indices of Discrimination and Communication by experimental and control groups.

trainee rating	group	
	experimental	control
Index of Discrimination	-0.32	+0.15
Index of Communication	+0.62	+0.09

The data in Table 3.3 indicate that the experimental group changed their ratings to a greater degree than did the control group. These changes are in a direction toward facilitative behavior in that the discrimination rating was lowered toward zero deviation from the correct Carkhuff-established ratings, and the group communication ratings increased toward level five which is the maximally

facilitative response. It should be noted that in the mean change of ratings on D/I these change ratings are calculated on an absolute deviation from the Carkhuff established ratings. In other words any deviation is considered as a negative quantity.

The next question to ask is, are these differences statistically significant? Analyses were performed to determine the effects that the program (treatment and control) had on the ratings of the ability of the trainees to discriminate and communicate affect. Multivariate analysis of variance was used as the statistical procedure to determine these effects. Multivariate analysis is a recently developed statistical procedure for which computer programs have also just recently been developed. The multivariate procedure prevents the alpha level of a statistical analysis (the probability of rejecting the null hypothesis when it is true) from being inflated when many dependent variables are studied. If multivariate analysis was not employed, the repeated use of analysis of variance would tend to cause random significance to occur in the statistical analysis of an experiment. In this study each multivariate analysis summary table contains a multivariate probability level which refers to all the dependent variables taken as a group. Following this, univariate-F probability levels are given which are the alpha levels of analysis of variance tests on the dependent variables taken separately. The standard

.05 level of significance was used to reject the item of interest.

Table 3.4 shows the results of the multivariate and univariate analysis for the differential effect of treatment and control on the ratings of trainees on both D/I and C/I.

Table 3.4. Multivariate and univariate analyses of trainee post-test minus pre-test ratings on both Indices of Discrimination and Communication and the differential effect of experimental and control treatments.

multivariate	F	28.0705	
	df	2 and 91	
	P less than	0.0001	
univariate	variable	F	P less than
	Dif Dis*	14.6302	0.0003
	Dif Com*	51.3165	0.0001

*Note: In the analysis tables "Dif Dis" is an abbreviation for trainee post-test minus pre-test discrimination ratings, and "Dif Com" is an abbreviation for trainee post-test minus pre-test communication ratings.

In examining the univariate section of Table 3.4, it can be seen that the treatment has a significantly greater effect than the control of no treatment on trainee rating changes on D/I. The probability that this difference is due to chance is less than .0003. The treatment also has a significantly greater effect than the control on trainee rating

changes on C/I. The probability of this occurring by chance is less than .0001. Both D/I and C/I, then, are affected to a significantly greater extent by the experimental treatment when compared to the control procedures.

An examination of the multivariate section of Table 3.4 reveals a significant overall treatment effect over control. The probability of this occurring by chance is less than .0001. The multivariate finding is consistent with the findings of both of the univariate tests in that when compared to D/I and C/I rating changes of the control groups there is a significant treatment effect to bring trainee ratings on both D/I and C/I closer to interchangeable. There was, indeed, a significant treatment effect, although this effect was not great enough to bring all trainee post-test ratings to interchangeable on the Carkhuff scales, D/I and C/I.

Hypothesis 2

In this study, a second aspect of Carkhuff's theory of training psychological helpers was tested. The second hypothesis was stated as follows: For all persons administered empathy training, there will be no increase to interchangeable in their ratings either on the Index of Discrimination (D/I) or the Index of Communication (C/I) after training when the trainer is rated below interchangeable on C/I.

Tables 3.5 and 3.6 show the frequency of experimental and control subjects' ratings on pre and post-tests of D/I and C/I. Subjects have been grouped according to their ratings on D/I and C/I. Both tables contain the results of training by trainers rated below interchangeable on C/I. As noted above, the control group in Table 3.6 has all 44 of the subjects because there were no control group trainers rated interchangeable or above on C/I.

Table 3.5 indicates that as a group two subjects of the experimental group, who were rated as functioning at a subtracting level on the pre-test of D/I and who received training conducted by trainers who were rated as functioning

Table 3.5. The frequency of experimental subjects' ratings on pre and post-tests of Indices of Discrimination and Communication by level of facilitation.

test	subject ratings			
	Index of Discrimination		Index of Communication	
	subtract- ing	interchange- able or adding	subtract- ing	interchange- able or adding
pre-test	23	3	26	0
post-test	21	5	26	0

Note: The subjects were trained by persons rated below interchangeable on Index of Communication.

Table 3.6 The frequency of control subjects' ratings on pre and post-tests of Indices of Discrimination and Communication by level of facilitation.

test	subject ratings			
	Index of Discrimination		Index of Communication	
	subtract- ing	interchange- able or adding	subtract- ing	interchange- able or adding
pre-test	43	1	44	0
post-test	44	0	44	0

Note: The groups of subjects were led by persons rated below interchangeable or Index of Communication.

at a subtracting level on C/I, attained ratings on the post-test of D/I which placed them at a facilitative level of interchangeable or adding. None of the subjects attained a level of interchangeable or adding on the post-test of C/I.

An examination of Table 3.6 indicates that one person of the control group who rated interchangeable or adding on the pre-test of D/I and who received training conducted by a person who was rated as functioning at a subtracting level on C/I decreased in rated facilitative ability by attaining a rating of subtracting on the post-test of D/I. No subjects in the control groups, however, were rated interchangeable or adding on the post-tests of D/I or C/I.

The data contained in Tables 3.5 and 3.6 indicate that hypothesis 2 must be partially rejected. As a group,

two subjects of the experimental group attained ratings of interchangeable or adding on the post-test of D/I when trained by persons rated as functioning at a subtracting level on C/I. Similar effects were found for experimental subjects receiving empathy training from trainers rated as functioning at an interchangeable or adding level on C/I. The control subjects remained essentially the same on the post-test as on the pre-test of D/I and C/I.

The effects of the experimental treatment did produce only a small number of subjects who received interchangeable or adding ratings on the post-test of D/I when compared with their pre-test ratings. None of the subjects attained ratings of interchangeable or adding on post-test of C/I. While hypothesis 2 must be partially rejected on the basis of the data in Tables 3.5 and 3.6, these data also suggest that possibly the effects of the training program were not powerful enough to provide an adequate test of hypothesis 2.

A question of related interest to hypothesis 2 is that of the effect of the trainer. Is there any trainer effect? If so, which trainer behaviors of those tested affected trainee-rated behaviors? Two trainer behaviors are under consideration: trainer Index of Discrimination (D/I) and trainer Index of Communication (C/I).

First multivariate and univariate analyses of variance were performed on trainee post-minus pre-test ratings using trainer D/I ratings. This analysis was performed on

all subjects in both experimental and control groups. Trainer D/I ratings were dichotomized as subtracting and as interchangeable or adding. See Appendix D for the scale for dichotomizing D/I scores. The results of these analyses using trainer D/I ratings are shown in Table 3.7.

Table 3.7. Multivariate and univariate analyses for the effect of trainer Index of Discrimination dichotomized subtracting and interchangeable-adding on trainee post-minus pre-test Indices of Discrimination and Communication ratings.

multivariate	F	0.8672	
	df	2 and 91	
	P less than	0.4236	
univariate	variable	F	P less than
	Dif Dis	1.3654	0.2457
	Dif Com	0.8390	0.3621

In examining the univariate data in Table 3.7, it can be seen that the probability that trainers rated interchangeable or adding on D/I had any greater effect than trainers rated subtracting on D/I is less than .2457 for trainee D/I rating differences and less than .3621 for trainee C/I rating differences. As the standard .05 level was set for rejecting a trainer differential D/I effect, the univariate data in Table 3.7 indicates no significant greater effect of trainers rated interchangeable or adding

on D/I from those rated subtracting on D/I on either of the trainee C/I or D/I rating differences.

An examination of the multivariate data reveals that the probability that trainers rated interchangeable or adding on D/I had any more of a significant effect than trainers rated subtracting on D/I is less than .4236. The multivariate analysis indicates there is no significant differential effect of trainer D/I ratings upon trainee D/I or C/I rating differences.

It is indicated from the data in Table 3.7 that there is no significant trainer D/I effect on trainee ratings. With trainer D/I having no demonstrable significant effect, trainer C/I effect should be examined.

An analysis of experimental results to determine the effect of the level of trainer C/I upon trainee rating differences on D/I and C/I was performed. As there were no trainers in the control group that were rated interchangeable or adding on C/I, it was necessary to eliminate the control groups from this analysis. Multivariate and univariate analyses were performed on the experimental group to determine if there was any difference of effect that trainers rated subtracting and trainers rated interchangeable or adding on C/I might have on trainee post-minus pre-test ratings on D/I and C/I. The results of the analyses are shown in Table 3.8.

Table 3.8. Multivariate and univariate analyses for the effect of trainer Index of Communication dichotomized subtracting and interchangeable-adding on experimental group trainee post-minus pre-test Indices of Discrimination and Communication ratings.

multivariate	F	6.5332	
	df	2 and 49	
	P less than	.0031	
univariate	variable	F	P less than
	Dif Dis	5.4711	.0234
	Dif Com	11.3012	.0015

An examination of the univariate data in Table 3.8 reveals that there is a significant differential effect between trainers rated subtracting and those rated interchangeable or adding on C/I upon trainee post-minus pre-test rating changes on both D/I and C/I. The probability that this significance is due to chance is less than .0234 for trainee D/I rating differences and .0015 for trainee C/I rating differences.

The multivariate analysis of the effect of trainer differential rating subtracting and interchangeable or adding on trainee D/I and C/I rating changes is also significant. The probability that this is due to change is less than .0031. The data in Table 3.8 indicates that there is a significant differential effect on trainee D/I and C/I

rating differences between those trainers rated subtracting on C/I and those trainers rated interchangeable or adding on C/I.

In summarizing the trainer effects, the differential D/I ratings, subtracting and interchangeable-adding, of trainers seems to have no significant effect on trainee D/I and C/I post-minus pre-test ratings whereas experimental group trainer C/I ratings do. Trainers rated interchangeable-adding on C/I have the effect of moving trainee D/I and C/I closer to interchangeable or adding ratings than do the trainers rated subtracting on C/I.

Hypothesis 3

A third hypothesis was stated as a means of providing a statistical check for hypothesis 1 and hypothesis 2. Hypothesis 3 is stated as follows: For all control subjects there will be no increase in Index of Discrimination (D/I) or Index of Communication (C/I) ratings to interchangeable or adding when there is no empathy training.

Table 3.9 contains all of the data from the control groups. Subjects are grouped according to the level of trainer-offered C/I. As was mentioned above, there were no trainers rated interchangeable or adding on C/I. For this reason, all 44 control subjects appear in the section under trainers rated subtracting on C/I.

Table 3.9. The frequency of control subjects' ratings on pre and post-tests of Indices of Discrimination and Communication by level of facilitation and grouped according to facilitative level of trainers.

test	subject ratings			
	Index of Discrimination		Index of Communication	
	subtract- ing	interchange- able or adding	subtract- ing	interchange- able or adding
	trainers rated as subtracting on C/I			
pre-test	43	1	44	0
post-test	44	0	44	0
test	trainers rated as interchangeable or adding on C/I			
	0	0	0	0
	0	0	0	0

An examination of the data in Table 3.9 reveals that all control subjects were trained by persons rated subtracting on C/I. Of those trained, one subject had a pre-test D/I rating of interchangeable or adding but was rated subtracting on D/I on the post-test. All other subjects made no change in their pre-test rating on D/I and C/I. While the data in Table 3.9 suggest the acceptance of hypothesis 3, it must also be taken into consideration that there were no trainees rated interchangeable or adding on C/I. For this

reason, the control data gathered cannot assist in providing an adequate control for the data gathered to test hypothesis 2.

The Effects of the Training Program
Upon Retention of Discrimination
and Communication Skills

The final question of interest generated by this study is, once training is accomplished is there retention of learned discrimination and communication skills? In order to provide an answer to this question, the post-tests of Index of Discrimination (D/I) and Index of Communication (C/I) were administered to different sections of the experimental and control groups at three separate times. The post-tests were administered: (1) immediately after training; (2) two weeks after training; and (3) four weeks after training.

Multivariate and univariate analyses were performed on the post-minus pre-test D/I and C/I ratings of all trainees to determine if there was any significant change in these scores over time, that is the 2-two week intervals of the post testing. Table 3.10 contains the results of this analysis.

In examining the univariate data in Table 3.10, it is evident by the probabilities of .3190 and .8994 that two-week and four-week intervals have no significant effect on either trainee D/I or trainee C/I. The multivariate

Table 3.10. Multivariate and univariate analyses of trainee post-minus pre-test Indices of Discrimination and Communication ratings in relation to time across three post-tests given at two-week intervals.

	F	.6208	
multivariate	df	4 and 178	
	P less than	.6483	
	variable	F	P less than
univariate	Dif Dis	1.1575	.3190
	Dif Com	0.1002	.8994

data suggest that there is no effect of time on the combined trainee scores on D/I and C/I. The data in Table 3.10 indicate no significant effect for time after training upon either of the trainee measures D/I and C/I when comparing tests administered immediately after training to tests administered immediately after training to tests administered two weeks after training, and when tests administered immediately after training are compared with tests administered four weeks after training.

To further substantiate the lack of effect time has on trainee D/I and C/I ratings, analyses were performed to determine if there was any interaction effect between time and program (experimental and control). The results of these analyses is reported in Table 3.11.

Table 3.11. Multivariate and univariate analyses for interaction between time across three post-tests given at two-week intervals and program (experimental and control).

multivariate	F	.2594	
	df	4 and 178	
	P less than	.9036	
univariate	variable	F	P less than
	Dif Dis	.4226	.6567
	Dif Com	.0286	.9719

The univariate data presented in Table 3.11 indicate that there are no significant trainee D/I or C/I rating changes when the interaction between the type of program (experimental and control) and the times of post-testing are examined. The data indicate no significant time X program interaction. The multivariate analysis also substantiates the univariate analyses. With a probability of less than .9036, there is evidence that there is no overall time X program interaction effect on both trainee D/I and trainee C/I rating changes.

In summary, the trainee D/I and C/I scores do not significantly diminish over the time of four weeks nor is there any significant time X program interaction that affects the trainee acquired ratings.

Summary

Inter-trainer Reliability

Analyses were performed on the experimental data to test both the hypotheses stated in Chapter II and to gather questions related to the hypotheses. A summary of the results of those analyses follows.

As the rating of trainee Index of Communication (C/I) responses needed to be reliable for accurate interpretation of the results, a Pearson Product-Moment Correlation was calculated on the independent ratings of the two judges. A correlation of .70 was calculated; this correlation was sufficiently high and, therefore, sufficiently reliable for their inclusion in this study.

Hypothesis 1

Two trainees whose pre-test D/I ratings were rated subtracting were rated interchangeable or adding on the post-test after empathy training. Also, two trainees who were rated subtracting on the pre-test of D/I and Index of Communication (C/I) were rated interchangeable or adding on the post-test of C/I. This was sufficient evidence to partially reject hypothesis 1 which stated that trainees with subtracting D/I ratings could not be trained to raise their D/I or C/I ratings. The data also suggest that the training program was not powerful enough to adequately test

hypothesis 1. Even though only the ratings of four trainees were increased to interchangeable at the conclusion of the training program, there was an observed change in ratings between the experimental and control groups. This is to say that members who received the training program tended to increase their ratings significantly even though the overall ratings of the experimental group did not reach the interchangeable level of functioning. Multivariate and univariate analyses provided evidence that there was a significant change in both trainee D/I and trainee C/I and that this was due to the experimental procedure when compared to control.

Hypothesis 2

In the group of trainees trained by persons rated subtracting on C/I, two trainees who were rated as subtracting on the pre-test of D/I increased their post-test of D/I rating to interchangeable. There were no persons who received higher post-test than pre-test ratings in the control groups trained by persons rated subtracting on C/I. On the basis of this data, hypothesis 2 must be partially rejected. The data suggest that the training program was not powerful enough to adequately test hypothesis 2. Multivariate and univariate analyses of experimental group data revealed a significant effect between interchangeable or adding C/I rated trainers and subtracting C/I rated trainers upon both trainee D/I and C/I. Multivariate and univariate

analysis revealed no significant differential effect between subtracting and interchangeable-adding D/I rated trainers.

Hypothesis 3

No control group trainers were rated at interchangeable on either D/I or C/I post-tests. For this reason hypothesis 3 was partially accepted. Because there were no control group trainers rated at interchangeable or adding on C/I, the data for this hypothesis did not provide an adequate test for hypothesis 2.

Related Questions Concerning Retention of D/A and C/A Behaviors

Multivariate and univariate analyses revealed no significant loss of trainee D/I or C/I ratings across a four-week post-testing period. This was true for both experimental and control groups. Thus, acquired D/I and C/I ratings do not significantly diminish across a four-week time span.

The above are the results of the analysis of the data generated from the experimental program and hypotheses described in Chapter II. Chapter IV will include a discussion and interpretation of these results.

CHAPTER IV

SUMMARY, DISCUSSION AND CONCLUSIONS

Summary

The purpose of this study was to test two aspects of Carkhuff's theory (Carkhuff and Berenson, 1967; Carkhuff, 1969) concerning the training of counselors, paraprofessionals or similar people who work in a helping role in some type of mental health program. The first aspect of Carkhuff's theory that was studied pertained to the empathic skills of the trainee. Carkhuff has stated that trainees who are rated as subtracting on Index of Discrimination (D/I) should not be trained to be facilitative helpers but are more appropriately in need of personality reorganization. The second aspect of Carkhuff's theory that was studied pertained to the empathic skills of the trainer. Carkhuff has stated that trainers who are rated as subtracting on the Index of Communication (C/I) cannot effectively train persons to be facilitative helpers as they cannot train persons to be more facilitative than themselves.

The subjects of the study were 96 students and 8 group laboratory instructors of a required course for those preparing to become teachers called Education 200, "The

Individual and Society." Two experimental training conditions were developed within the classes. In the first condition, trainers who were rated as interchangeable or adding on Index of Communication (C/I) were paired with trainees rated as subtracting on Index of Discrimination (D/I) in an attempt to determine if trainees rated subtracting on D/I could change their D/I and C/I ratings to interchangeable or adding. In the second experimental condition that was developed, trainers who were rated as subtracting on Index of Communication (C/I) were paired with trainees rated as subtracting on Index of Discrimination (D/I). This was done in an attempt to determine if trainers rated subtracting on C/I could influence the raising of trainee D/I and C/I ratings to interchangeable or adding. The control groups received no training.

Ten classes were used. Five of them were assigned to the experimental treatment, and five of them were assigned to a control condition. The basic hypotheses were that: (1) trainees rated as subtracting on D/I could not be trained to raise their D/I or C/I ratings to interchangeable or adding, and (2) trainers rated as subtracting on C/I could not effectively train persons to raise their D/I or C/I ratings to interchangeable or adding.

Some evidence was found to partially reject hypothesis 1 which stated that trainees rated subtracting on D/I could not be trained to raise their ratings on D/I or

C/I. Four subjects were rated interchangeable or adding on the post-tests, two on D/I and two on C/I. These subjects were trained by persons rated as interchangeable or adding on C/I.

When comparing treatment and control group effects upon trainee D/I and C/I post-minus pre-test ratings, a significant training effect was found. The training had the effect of moving the treatment group trainee D/I and C/I ratings significantly closer to interchangeable than the control group trainee D/I and C/I ratings.

Also, some evidence was found that subjects trained by persons rated as subtracting on C/I could raise their D/I ratings to interchangeable. As a group, those subjects trained by persons rated as subtracting on C/I were able to produce two subjects whose post-test ratings on D/I were interchangeable or adding. No trainees of this group received post-test ratings on C/I of interchangeable or adding. In examining which of the trainer behaviors had effects upon trainee D/I and C/I, a significant difference was found between trainers rated subtracting on C/I and trainers rated interchangeable or adding on C/I. Persons trained by trainers rated interchangeable or adding on C/I had post-test ratings on both D/I and C/I significantly closer to interchangeable than did those who were trained by persons rated subtracting on C/I. Analysis of trainer D/I indicated

no significant effect upon either trainee D/I or trainee C/I post-test ratings.

An analysis of the results of the administration of the post-tests of D/I and C/I at three separate times, immediately after training, two weeks after training and four weeks after training, revealed that there was no significant loss of acquired D/I and C/I ratings across the four-week time span.

Discussion

The present study showed that treatment effects did exist but were not of sufficient power to fully reject the hypotheses under consideration. Some factors that influenced the study may remain hidden and some interactions between known elements may also remain hidden. However, recognized sources of potential error can be usefully reviewed. The results of the study may possibly be attributed to the following factors: theory, sampling, design and statistics, instrumentation, and treatment. Pertinent factors concerning each of the above potential sources of error will be discussed below.

Theory

Within the category of the theoretical basis of this study lie several important sources for error that necessitate discussion.

The first pertains to the development of the hypothesis used. As originally developed, the study was to have trainers rated as subtracting on Index of Communication (C/I) and trainers rated as interchangeable or adding on Index of Communication (C/I) lead the experimental and control groups. It was impossible to accomplish this. No trainers rated as interchangeable or adding were found in the control groups. This necessitated the elimination of the statistical analysis of the hypotheses. Instead, a procedure for direct examination of the data was designed after the data was collected. It is suggested for further studies of this nature that this difficulty be eliminated if possible by having more control over the design of the study. This will be discussed further in the section to follow.

Another possible area of error within theory rests in the literature. The possibility of a misinterpretation, or partial understanding, of the literature cannot be eliminated as a source of error although no such error was uncovered in the course of this study.

Sample

There were several possibilities for error to enter into the study from the procedures used in sampling the population; these were in the choosing of trainers and in the choosing of trainees.

The trainers could not be randomly assigned to groups. They volunteered to lead the experimental or control groups rather than being randomly assigned to either the experimental or control groups. This violated randomness and also may have created a bias among trainers. In addition, although they had extensive training experience, all of the trainers were not at an interchangeable or adding level on Index of Communication (C/I) when rated for purposes of this study. Only two trainers in the experimental group were at an interchangeable or adding level on C/I, and no trainers in the control groups were rated as interchangeable or adding on C/I. The lack of trainers in the control groups who were rated as interchangeable or adding on C/I created difficulties for evaluating the outcome of the study. Also, the attitude toward the experimental procedure on the part of some of the trainers was somewhat skeptical. This will be discussed under the section on Treatments.

Enlistment of trainees also presented problems. By the very nature of using people from an already-established structure such as college classes, there were several additional sources of error. All students could not be induced to participate. Some did not wish to be a part of training, some missed the pre-test, and some missed the post-test. In all, 44 subjects out of an original population of 148 were not included in the results of the study. The dropouts were, however, evenly distributed between experimental and control

groups. None of the sections of Education 200 was exempted from the study; all ten sections were included in either the experimental or control groups. This eliminated the possibility of having a section voluntarily drop out of the study and thus increasing the violation of the principal assumption of randomness.

There are no apparent unusual criteria for admission into Education 200, and the data in Chapter II do not indicate anything unusual about this particular group of persons. Their pre-test scores on D/I and C/I seem to be uniformly subtracting. This is in line with Carkhuff's description of the population in general (1969). This would seem to indicate that the sample chosen is representative of the population in general on their ability to attain ratings on Carkhuff's instruments.

The combined sampling errors violate an assumption of randomness that is necessary for samples. There is a selection factor on the part of both the trainers and trainees as to their participation in the study as mentioned above; this also violates randomness. The demographic data from Chapter II do not reveal any additional deviations from what might be considered the population from which volunteers for paraprofessional training might come other than this is a college class in Education and volunteers might come from disciplines other than Education. As a number of the subjects were older students from outlying communities returning

to the campus for summer classes, the sample probably more closely approximates the population from which paraprofessionals volunteer, i.e., the community-at-large.

Design and Statistical Treatment

Because of the use of a class, it was necessary to develop a design around the class structure of Education 200. All ten class sections were used. The classes did not all meet at the same time or days. This developed a possible error in terms of history. It was also necessary for the investigator to accept the classes as they were established by the registration of the students. In other words, students could not be moved from one section to another. This created unequal class or section sizes although the experimental and control groups were of approximately equal size. An additional error may have been introduced by the fact that some sections of the class may have been selected by subjects, with certain unidentified characteristics, because of the hour of the class or the days on which the class met. It was impossible to assign students for a more effective design to adhere to randomness.

The hypotheses presented one of the greatest difficulties to the analysis. They were stated in a manner that could be validated or invalidated by direct examination of the data but not by statistical analyses. In any further studies of this nature, it is suggested that

hypotheses that lend themselves to more direct statistical analyses be selected.

The control groups also may have contributed to error in the study. The control groups were not inactive during the course of the study. They participated in class activities other than the training program. Such activities included, but were not limited to, discussion, awareness or sensitivity exercises, and simulation games of various classroom encounters. They did not, however, receive empathy training in any formal structure. The activities of the control group may have influenced the post-test ratings of the control group subjects, although it is impossible to determine in which direction, facilitative or non-facilitative, the scores were influenced.

Because there were ten groups and eight leaders, it is suggested for further studies that more trainers and fewer trainees per trainer, possibly one-to-one, be arranged. It would be advisable to have the trainers work with more than one group, possibly three or four. These changes may correct for the error of the classes meeting at different times and days. Also, it would offer data to eliminate the possibility of trainee-trainee interaction which was a problem presented in this study as trainees were not trained independently of each other.

One defect of the study seems to be in the amount or length of time spent in training. The hours seemed

insufficient to allow for sufficient change on trainee Index of Discrimination (D/I) and Index of Communication (C/I) ratings. The rating changes for the experimental group were in the direction of being more facilitative (interchangeable) on both D/I and C/I, but few subjects reached interchangeable ratings on D/I and C/I. It is speculated that with more time, the ratings could have reached interchangeability. This is open to further research. Other references by Carkhuff to 100 hours of training may be more reasonable than ten hours (Carkhuff, 1969), although the optimal time for training is not yet settled and is open for further research.

Instruments

Carkhuff and his colleagues have presented numerous studies not only on using the two instruments, Index of Discrimination (D/I) and Index of Communication (C/I), but also on researching the reliability and validity of the two instruments (Carkhuff, 1969). By the design of the instruments, they have content and face validity. However, an important aspect of the Index of Communication (C/I) instrument's reliability and validity is the skill with which the subject responses are rated. Raters must be trained to evaluate responses accurately and be consistently accurate. The raters employed in this study had some training by a colleague of Carkhuff. Their inter-rater reliability coefficient was .70. This seemed a sufficiently high correlation

for their ratings to be included in the study although some inter-rater reliability coefficients reported by Carkhuff (1969) are .90 or higher. This lowered reliability coefficient may have influenced the outcome by reducing the accuracy of Index of Communication ratings. Also, there may have been a consistent bias on the raters' part. Although they rated independently of each other, they are acquainted with each other and were trained to judge at about the same time. They may have rated consistently high or consistently low all the while agreeing with each other with a reliability coefficient of .70. Notwithstanding this inherent weakness, the instruments, Index of Discrimination and Index of Communication, seemed sufficiently reliable and valid for their inclusion in this study. It is also possible that the low number of trainees who reached interchangeable on the instruments reached these interchangeable ratings by chance alone and not by the power of the trainers or the training procedure.

The original two Carkhuff instruments, Index of Discrimination and Index of Communication, were randomly split-halved. This prevented the subjects from having pre-test knowledge of the items in the post-test.

Treatments

The training procedure used in this study may have also contributed to error. Although the treatment itself has been used successfully to train persons to develop empathic skills by a crisis-intervention center in East Lansing, Michigan for at least three years in a form approximate to the one used in this study, it may have been inadequately administered by the group leaders of this study. The trainers and training were monitored by the investigator and no deviations from the printed form were seen or allowed to go uncorrected. However, several of the trainers seemed skeptical of the rigid approach and this may have had an attitudinal effect on the trainees. Several refused to use the method and had to be used as control group leaders rather than experimental group leaders; this created an obvious bias in the design.

The treatment was designed to raise the trainee ratings on Index of Discrimination (D/I) and Index of Communication (C/I). An unknown minimal amount of time of exposure to this training procedure is necessary for the ratings on D/I and C/I to reach interchangeable or adding. It is quite possible that there was insufficient exposure to the treatment for this rating change to occur. The length of training exposure is an aspect of training paraprofessional helpers that needs to be more closely examined.

In summary, five potential sources of error which may have influenced the outcome of this study have been discussed. It should not be inferred that all of these occurred. In fact, some may be incompatible with others. However, they are all relevant potential sources for experimental error and as such should be considered in the interpretation of the results of this study.

Conclusions

The conclusions to be drawn from this study are:

1. That at least to a limited degree (four subjects out of 52), subjects rated subtracting on Index of Discrimination can raise their Index of Discrimination and/or Communication ratings by being trained for a period of ten hours by trainers rated as interchangeable or adding on Index of Communication. They can be trained rather than undergo counseling or personality reorganization.

2. Although the training program did not have sufficient power to raise all trainees to interchangeable in ten hours, it did have a significant effect. Regardless of trainer-offered level of Index of Communication ratings (subtracting or interchangeable-adding), when compared to the control group the experimental subjects had both Indices of Discrimination and Communication rating changes that moved to a greater degree toward interchangeable. There was a significant training effect. Trainers who themselves were

rated as subtracting on C/I had two trainees who were able to be rated at interchangeable or adding on post-test Index of Discrimination. In other words, two trainees of trainers rated subtracting on C/I were able to raise their D/I ratings to interchangeable.

3. Trainers who used the training method and who were rated as interchangeable or adding on Index of Communication had a significantly greater effect in moving trainee Index of Discrimination and Index of Communication ratings closer to interchangeable than trainers who used the training method but were rated as subtracting on Index of Communication (C/I).

4. Trainee Indices of Discrimination and Communication ratings did not reflect any significant differential change when trained by trainers rated either as subtracting or interchangeable-adding on Index of Discrimination. This is true for both experimental and control groups. This calls into question the particular function that discrimination of empathy plays in influencing the communication of empathy. A possibility is that discrimination is independent of communication. As an example, two trainees who are rated subtracting on D/I and C/I may be trained by a person rated interchangeable or adding on C/I. The trainer may also influence the trainees' C/I rating to interchangeable or adding while the trainees' D/I rating remains constant.

5. There was no significant loss of trainee ratings on Indices of Discrimination and Communication over a four-week post-testing period. In other words, trainees tended to retain the gains on D/I and C/I rather than have their ratings diminish significantly.

6. This study was not a conclusive test of the aspects of Carkhuff's training model which were of interest. However, the results obtained from the investigation revealed the possibilities of increasing the ratings of subjects in the discrimination and communication of empathy to interchangeable or adding when such subjects have been rated as functioning at a subtracting level prior to training. This makes suspect the statements by Carkhuff that such subjects cannot profit from empathy training but need some form of psychotherapy or counseling.

The results of this study after due consideration is given to the limitations of the design, does tend to support Carkhuff's idea that trainers who are rated as functioning at a level of interchangeable or adding on C/I are better able to provide facilitative assistance to trainees who are engaged in a program to learn the skills of discrimination and communicating empathy.

In view of the above discussion and conclusions, the following suggestions are made:

1. An effort should be made to more carefully control for trainer entry behaviors. This would allow proper

trainer placement in groups to avoid having a group without a leader rated interchangeable or adding on C/I as in this study.

2. Trainees should be randomly assigned to avoid any selection factor that might be present in their voluntarily assigning themselves to a particular group. This suggestion along with suggestion (1) would also allow for greater flexibility in design of the study.

3. Although trainer Indices of Discrimination and Communication are deemed important trainer characteristics, they may not be the only ones that affect trainee Indices of Communication and Discrimination ratings. Further investigations might consider other trainer behaviors.

4. The training procedure also may be something that can be varied. This would include not only the length of the training time but also the actual procedure itself as both are open to considerable variation. Hopefully, an optimal length of time for training will be found.

In conclusion, the results of the present study indicate a possible direction for the training of psychological helpers. Length of exposure to training is one of the variables that needs further investigation. Efficient, behavioral methods for training persons in appropriate psychological helping skills are needed.

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APPENDIX A

SCALE FOR EMPATHIC UNDERSTANDING

SCALE 1
EMPATHIC UNDERSTANDING IN INTERPERSONAL PROCESSES
A SCALE FOR MEASUREMENT

Level 1

The verbal and behavioral expressions of the helper either do not attend to or detract significantly from the verbal and behavioral expressions of the helpee(s) in that they communicate significantly less of the helpee's feelings and experiences than the helpee has communicated himself.

EXAMPLE: The helper communicates no awareness of even the most obvious, expressed surface feelings of the helpee. The helper may be bored or disinterested or simply operating from a preconceived frame of reference which totally excludes that of the helpee(s).

In summary, the helper does everything but express that he is listening, understanding, or being sensitive to even the most obvious feelings of the helpee in such a way as to detract significantly from the communications of the helpee.

Level 2

While the helper responds to the expressed feelings of the helpee(s), he does so in such a way that he subtracts noticeable effect from the communications of the helpee.

EXAMPLE: The helper may communicate some awareness of obvious surface feelings of the helpee, but his communications drain off a level of the affect and distort the level of meaning. The helper may communicate his own ideas of what may be going on, but these are not congruent with the expressions of the helpee.

In summary, the helper tends to respond to other than what the helpee is expressing or indicating.

Level 3

The expressions of the helper in response to the expressions of the helpee(s) are essentially interchangeable with those of the helpee in that they express essentially the same affect and meaning.

EXAMPLE: The helper responds with accurate understanding of the surface feelings of the helpee but may not respond to or may misinterpret the deeper feelings.

In summary, the helper is responding so as to neither subtract from nor add to the expressions of the helpee. He does not respond accurately to how that person really feels beneath the surface feelings; but he indicates a willingness and openness to do so. Level 3 constitutes the minimal level of facilitative interpersonal functioning.

Level 4

The responses of the helper add noticeably to the expressions of the helpee(s) in such a way as to express feelings a level deeper than the helpee was able to express himself.

EXAMPLE: The helper communicates his understanding of the expressions of the helpee at a level deeper than they were expressed and thus enables the helpee to experience and/or express feelings he was unable to express previously.

In summary, the helper's responses add deeper feeling and meaning to the expressions of the helpee.

Level 5

The helper's responses add significantly to the feeling and meaning of the expressions of the helpee(s) in such a way as to accurately express feelings levels below what the helpee himself was able to express or, in the event of ongoing, deep self-exploration on the helpee's part, to be fully with him in his deepest moments.

EXAMPLE: The helper responds with accuracy to all of the helpee's deeper as well as surface feelings. He is "tuned in" on the helpee's wave length. The helper and the helpee might proceed together to explore previously unexplored areas of human existence.

In summary, the helper is responding with a full awareness of who the other person is and with a comprehensive and accurate empathic understanding of that individual's deepest feelings (Carkhuff, 1969).

GUIDELINES FOR HELPER-HELPEE INTERACTION

I. Helper-helpee interaction.

- A. Limit to five minutes.
- B. Group members participate by active listening to both parties.
- C. Helper should try to develop the following behaviors:
 - 1. Clarifying and expanding the nature of the helpee's problem. Ask yourself if you are sure you understand what the problem is, what variables are involved in making it a problem.
 - 2. Eliciting and clarifying helpee's response to the problem, including his feelings about it and about himself. How is this person "taking it," trying to cope with it, and how does having this problem make him feel about himself?
 - 3. Assessing severity of problem with an eye to sources of help which may be useful to the helpee in resolving the problem or his feelings about it.

(Remember: You don't have to solve the problem yourself. Your function can be one of facilitator, to help the person with the problem to become engaged with the system of "helping" agencies or professions such as the Counselling Center, etc. to which he apparently has not had previous access. It is also often important merely to provide support and encouragement for the person to face someone with whom he is having a problem, as that is where it is best solved.)

II. Discussion period.

- A. Helper presents to the group a BRIEF (one minute) summary of what he now knows about the helpee and his problem, including:
 - 1. What kinds of stresses are involved in the problems he faces.
 - 2. The individual's current method of responding to or coping with what stress:
 - a. Somatic--that is, aches, pains, upset stomach, cramps, headache, or any other physical complaint.

APPENDIX B

TRAINING PROCEDURES

Guidelines for Helper-Helpee Interaction

- b. Cognitive--confusion, rumination about the problem or self to the exclusion of any other thoughts, inability to concentrate, etc.
 - c. Affective--depression, anxiety, fearfulness, elation, lack of feelings, apathetic, pessimistic, feelings of worthlessness, etc.
- 3. Whether problem is serious enough to require referral.
- B. Helpee presents to the group a BRIEF (one minute) summary of his response to the helper, including:
 - 1. Did the helper seem to understand the nature and significance of the problem to you? How did you know that? What did he do to convey that understanding?
 - 2. Did the helper offer anything of value or of help to you? What seemed helpful? What was unhelpful or upsetting?
- C. Group discussion follows, and should focus on:
 - 1. Quality of the helper-helpee interaction:
 - a. How much understanding was shown? How was it communicated?
 - b. How well did the helper clarify the problem? Was it clear to you? What would you have explored further?
 - c. Was there a reduction of anxiety and an increase in rationality on the part of the helpee? What did the helper do which seemed to facilitate that?
 - d. Effect of helper's interventions on helpee's attempts to express himself--what did the helper do which assisted him, what did he do which hindered or blocked him? Comments on helper's tone of voice, nature of his intervention may be useful here.
 - e. Was helpee responsive, hostile, passive, or what? What problems did he present to helper re: ease of communication, acceptance or rejection of communications, etc.?

Guidelines for Helper-Helppee Interaction

2. Direction of interaction:

- a. Did they progress toward a solution, or get bogged down in a circular discussion that wasn't going anywhere?
- b. What else would the helper need to know in order to better assess the situation or help the helpee, or make adequate recommendations re: a referral?
 - i. More information about the problem?
 - ii. Clearer picture of helpee's response--e.g., how depressed, anxious, etc. is he?

3. What resources, alternatives does the helpee currently perceive as available? Are they sufficient to allow him to choose a solution, or might it be helpful to explore further alternatives?

CRITERIA FOR CONSTRUCTIVE FEEDBACK

Feedback statements are helpful when they are:

1. Specific rather than general. "I don't think you heard Jack when he said" rather than, "You never pay attention."
2. Tentative rather than absolute. "You seem unconcerned." rather than, "You don't give a damn."
3. Informing rather than ordering. "I haven't finished yet." rather than, "Stop interrupting me."
4. Behavior descriptions: reporting specific acts of the other that affect you. "You often cut in on me before I finish. For instance" It describes what he is doing rather than placing a value on it.
Example: "When you yell at me it makes me feel like not talking to you anymore." rather than, "It's awful of you to yell at me."
5. Descriptions of your own feelings. "I was irritated when you cut in on me."
6. Your perceptions of others' actions. "I thought you weren't interested in understanding my idea."
7. It is directed toward behavior which the receiver can do something about.
8. It is asked for rather than imposed.
9. It is checked to insure clear communication.

Criteria for Constructive Feedback

Feedback statements are not helpful when they are:

1. Generalizations about others. "You never care about anything."
2. Name calling, accusative labeling. "You're rude."
"You're a phony."
3. Accusations, imputing undesirable motives to others.
"You enjoy putting people down."
4. Commands and demands that others change. "You'd better stop talking so much."

APPENDIX C

PRE-TEST INDEX OF DISCRIMINATION (D/I) AND
INDEX OF COMMUNICATION (C/I) INSTRUMENTS

AND

POST-TEST INDEX OF DISCRIMINATION (D/I) AND
INDEX OF COMMUNICATION (C/I) INSTRUMENTS

PRE-TEST DISCRIMINATION

#1 HELPEE: Sometimes I question my adequacy of raising three boys, especially the baby. I call him the baby--well, he is the last. I can't have any more. So I know I kept him a baby longer than the others. He won't let anyone else do things for him. If someone else opens the door, he says he wants Mommy to do it. If he closes the door, I have to open it. I encourage this. I do it. I don't know if this is right or wrong. He insists on sleeping with me every night and I allow it. And he says when he grows up he won't do it any more. Right now he is my baby and I don't discourage this much. I don't know if this comes out of my needs or if I'm making too much out of the situation or if this will handicap him when he goes to school--breaking away from Mamma. Is it going to be a traumatic experience for him? Is it something I'm creating for him? I do worry more about my children than I think most mothers do.

HELPER
RESPONSES:

1. So you find yourself raising a lot of questions as to if what you are doing is right for your child.
2. Is it perhaps possible for you to have the child become involved in a situation such as some experiences in a public park where the child could play and perhaps at a distance you could supervise--where the child can gain some independence?
3. Could you tell me--have you talked to your husband about this?
4. While you are raising a lot of questions for yourself about yourself in relation to your youngest child, you are raising some more basic questions about yourself in relation to you. In lots of ways you're not certain where you are going--not sure who you are.

#2 HELPEE: I get so frustrated and furious with my daughter. I just don't know what to do with her. She is bright and sensitive, but damn, she has some characteristics that make me so on edge. I can't handle it sometimes. She just--I feel

PRE-TEST DISCRIMINATION

myself getting more and more angry! She won't do what you tell her to. She tests limits like mad. I scream and yell and lose control and think there is something wrong with me--I'm not an understanding mother or something. Damn! What potential! What she could do with what she has. There are times she doesn't use what she's got. She gets by too cheaply. I just don't know what to do with her. Then she can be so nice and then, boy, she can be as onery as she can be. And then I scream and yell and I'm about ready to slam her across the room. I don't like to feel this way. I don't know what to do with it.

HELPER
RESPONSES:

1. So you find yourself screaming and yelling at your daughter more frequently during the past three months.
2. Why don't you try giving your daughter some very precise limitations. Tell her what you expect from her and what you don't expect from her. No excuses.
3. While she frustrates the hell out of you, what you are really asking is, "How can I help her? How can I help myself, particularly in relation to this kid?"
4. While she makes you very angry, you really care what happens to her.

#3 HELPEE: I'm really excited the way things are going at home with my husband. It's just amazing! We get along great together now. Sexually, I didn't know we could be that happy. I didn't know anyone could be that happy. It's just marvelous! I'm just so pleased, I don't know what else to say.

HELPER
RESPONSES:

1. It's a wonderful feeling when things are going well maritally.
2. It's really exciting to be alive again, to feel your body again, to be in love again.

PRE-TEST DISCRIMINATION

3. Is your husband aware of these changes?

4. Now don't go overboard on this right now. There will be problems that lie ahead and during these periods that you have these problems I want you to remember well the bliss you experienced in this moment in time.

#4 HELPEE: Gee, those people! Who do they think they are? I just can't stand interacting with them anymore. Just a bunch of phonies. They leave me so frustrated. They make me so anxious. I get angry at myself. I don't even want to be bothered with them anymore. I just wish I could be honest with them and tell them all to go to hell! But I guess I just can't do it.

HELPER
RESPONSES: 1. They really make you very angry. You wish you could handle them more effectively than you do.

2. Damn, they make you furious! But it's just not them. It's with yourself, too, because you don't act on how you feel.

3. Why do you feel these people are phony? What do they say to you?

4. Maybe society itself is at fault here--making you feel inadequate, giving you this negative view of yourself, leading you to be unable to successfully interact with others.

#5 HELPEE: I'm really excited! We are going to California. I'm going to have a second lease on life. I found a marvelous job! It's great! It's so great I can't believe it's true--it's so great! I have a secretarial job. I can be a mother and can have a part-time job which I think I will enjoy very much. I can be home when the kids get home from school. It's too good to be true. It's so exciting. New horizons are unfolding. I just can't wait to get started. It's great!

PRE-TEST DISCRIMINATION

- HELPER
RESPONSES:
1. Don't you think you are biting off a little more than you can chew? Don't you think that working and taking care of the children will be a little bit too much? How does your husband feel about this?
 2. Hey, that's a mighty good feeling. You are on your way now. Even though there are some things you don't know along the way, it's just exciting to be gone.
 3. Let me caution you to be cautious in your judgment. Don't be too hasty. Try to get settled first.
 4. It's a good feeling to contemplate doing these things.

#6 HELPEE: No response. (Moving about in chair.)

- HELPER
RESPONSES:
1. You can't really say all that you feel at this moment.
 2. A penny for your thoughts.
 3. Are you nervous? Maybe you haven't made the progress here we hoped for.
 4. You just don't know what to say at this moment.

#7 HELPEE: I finally found somebody I can really get along with. There is no pretentiousness about them at all. They are real and they understand me. I can be myself with them. I don't have to worry about what I say and that they might take me wrong, because I do sometimes say things that don't come out the way I want them to. I don't have to worry that they are going to criticize me. They are just marvelous people! I just can't wait to be with them! For once I actually enjoy going out and interacting. I don't think I could ever find people like this again. I can really be myself. It's such a wonderful feeling not to have people criticizing you for everything you say that doesn't

PRE-TEST DISCRIMINATION

agree with them. They are warm and understanding, and I just love them! It's just marvelous!

HELPER
RESPONSES:

1. Sounds like you found someone who really matters to you.
2. Why do these kind of people accept you?
3. That's a real good feeling to have someone to trust and share with. "Finally, I can be myself."
4. Now that you have found these people who enjoy you and whom you enjoy, spend your time with these people. Forget about the other types who make you anxious. Spend your time with the people who can understand and be warm with you.

#8 HELPEE: They wave that degree up like it's a pot of gold at the end of the rainbow. I used to think that, too, until I tried it. I'm happy being a housewife; I don't care to get a degree. But the people I associate with, the first thing they ask is, "Where did you get your degree?" I answer, "I don't have a degree." Christ, they look at you like you are some sort of a freak, some backwoodsman your husband picked up along the way. They actually believe that people with degrees are better. In fact, I think they are worse. I've found a lot of people without degrees that are a hell of a lot smarter than these people. They think that just because they have degrees they are something special. These poor kids that think they have to go to college or they are ruined. It seems that we are trying to perpetrate a fraud on these kids. If no degree, they think they will end up digging ditches the rest of their lives. They are looked down upon. That makes me sick.

HELPER
RESPONSES:

1. You really resent having to meet the goals other people set for you.
2. What do you mean by "it makes me sick?"

PRE-TEST DISCRIMINATION

3. Do you honestly feel a degree makes a person worse or better? And not having a degree makes you better? Do you realize society perpetrates many frauds and sets many prerequisites such as a degree. You must realize how doors are closed unless you have a degree, while the ditches are certainly open.

4. A lot of these expectations make you furious. Yet, they do tap in on something in yourself you are not sure of--something about yourself in relation to these other people.
(Carkhuff, 1969)

PRE-TEST COMMUNICATION

- #1 HELPEE: Sometimes I question my adequacy of raising three boys, especially the baby. I call him the baby--well, he is the last. I can't have any more. So I know I kept him a baby longer than the others. He won't let anyone else do things for him. If someone else opens the door, he says he wants Mommy to do it. If he closes the door, I have to open it. I encourage this. I do it. I don't know if this is right or wrong. He insists on sleeping with me every night and I allow it. And he says when he grows up he won't do it any more. Right now he is my baby and I don't discourage this much. I don't know if this comes out of my needs or if I'm making too much out of the situation or if this will handicap him when he goes to school--breaking away from Mamma. Is it going to be a traumatic experience for him? Is it something I'm creating for him? I do worry more about my children than I think most mothers do.
- #2 HELPEE: I get so frustrated and furious with my daughter. I just don't know what to do with her. She is bring and sensitive, but damn, she has some characteristics that make me so on edge. I can't handle it sometimes. She just--I feel myself getting more and more angry! She won't do what you tell her to. She tests limits like mad. I scream and yell and lose control and think there is something wrong with me--I'm not an understanding mother or something. Damn! What potential! What she could do with what she has. There are times she doesn't use what she's got. She gets by too cheaply. I just don't know what to do with her. Then she can be so nice and then, boy, she can be as onery as she can be. And then I scream and yell and I'm about ready to slam her across the room. I don't like to feel this way. I don't know what to do with it.
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PRE-TEST COMMUNICATION

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- #6 HELPEE: No response. (Moving about in chair.)
- #7 HELPEE: I finally found somebody I can really get along with. There is no pretentiousness about them at all. They are real and they understand me. I can be myself with them. I don't have to worry about what I say and that they might take me wrong, because I do sometimes say things that don't come out the way I want them to. I don't have to worry that they are going to criticize me. They are just marvelous people! I just can't wait to be with them! For once I actually enjoy going out and interacting. I don't think I could ever find people like this again. I can really be myself. It's such a wonderful feeling not to have people criticizing you for everything you say that doesn't agree with them. They are warm and understanding, and I just love them! It's just marvelous.
- #8 HELPEE: They wave that degree up like it's a pot of gold at the end of the rainbow. I used to think that, too, until I tried it. I'm happy being a housewife; I don't care to get a degree. But the people I associate with, the first thing they ask is, "Where did you get your degree?" I answer, "I don't have a degree."

PRE-TEST COMMUNICATION

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(Carkhuff, 1969)

POST-TEST DISCRIMINATION

#1 HELPEE: Who do you think you are? You call yourself a therapist! Damn, here I am spilling my guts out and all you do is look at the clock. You don't hear what I say. Your responses are not attuned to what I'm saying. I never heard of such therapy. You are supposed to be helping me. You are so wrapped up in your world you don't hear a thing I'm saying. You don't give me the time. The minute the hour is up you push me out the door whether I have something important to say or not. I--uh--it makes me so goddamn mad!

HELPER
RESPONSES:

1. You are suggesting I'm wrapped up in myself. Do you think that perhaps, in fact, this is your problem?
2. I'm only trying to listen to you. Really, I think we are making a whole lot of progress here.
3. You are pretty displeased with what has been going on here.
4. All right, you are furious, but I wonder if it's all mine or is there something else eating you.

#2 HELPEE: It's not an easy thing to talk about. I guess the heart of the problem is sort of a sexual problem. I never thought I would have this sort of problem. But I find myself not getting the fulfillment I used to. It's not as enjoyable--for my husband either, although we don't discuss it. I used to enjoy and look forward to making love. I used to have an orgasm but I don't anymore. I can't remember the last time I was satisfied. I find myself being attracted to other men and wondering what it would be like to go to bed with them. I don't know what this means. Is this symptomatic of our whole relationship as a marriage? Is something wrong with me or us?

POST-TEST DISCRIMINATION

HELPER
RESPONSES:

1. Perhaps you feel your marriage and role of mother is holding you back and preventing you from being something else you want to be. Your resentment here against your husband is manifested in your frigidity. Perhaps it is your way of paying him back for keeping you down in this role, for confining you, for restricting you.
2. What about your other relationship with your husband, his role as father and companion?
3. You don't quite know what to make of all this but you know something is dreadfully wrong and you are determined to find out for yourself, for your marriage.
4. What's happened between you and your husband has raised a lot of questions about you, about him, about your marriage.

#3 HELPEE: I don't know if I am right or wrong feeling the way I do. But I find myself withdrawing from people. I don't seem to socialize and play their stupid little games any more. I get upset and come home depressed and have headaches. It all seems so superficial. There was a time when I used to get along with everybody. Everybody said, "Isn't she wonderful. She gets along with everybody. Everybody likes her." I used to think that was something to be really proud of, but that was who I was at that time. I had no depth. I was what the crowd wanted me to be--the particular group I was with.

HELPER
RESPONSES:

1. You know you have changed a lot. There are a lot of things you want to do but no longer can.
2. You are damned sure who you can't be any longer but you are not sure who you are. Still hesitant as to who you are yet.
3. Who are these people that make you so angry? Why don't you tell them where to get off! They can't control your existence. You have to be your own person.

POST-TEST DISCRIMINATION

4. So you have a social problem involving interpersonal difficulties with others.

#4 HELPEE: I'm so pleased with the kids. They are doing just marvelously. They have done so well at school and at home; they get along together. It's amazing. I never thought they would. They seem a little older. They play together better and they enjoy each other, and I enjoy them. Life has become so much easier. It's really a joy to raise three boys. I didn't think it would be. I'm just so pleased and hopeful for the future. For them and for us. It's just great! I can't believe it. It's marvelous!

HELPER
RESPONSES:

1. It's a good feeling to have your kids settled once again.

2. Is it possible your kids were happy before but you never noticed it before? You mentioned your boys. How about your husband? Is he happy?

3. Do you feel this is a permanent change?

4. Hey, that's great! Whatever the problem, you know there will be problems, it's great to have experienced the positive side of it.

#5 HELPEE: He is ridiculous! Everything has to be done when he wants to do it, the way he wants it done. It's as if nobody else exists. It's everything he wants to do. There is a range of things I have to do--not just be a housewife and take care of the kids. Oh no, I have to do his typing for him, errands for him. If I don't do it right away, I'm stupid--I'm not a good wife or something stupid like that. I have an identity of my own, and I'm not going to have it wrapped up in him. It makes me--it infuriates me! I want to punch him right in the mouth. What am I going to do? Who does he think he is anyway?

POST-TEST DISCRIMINATION

HELPER
RESPONSES:

1. It really angers you when you realize in how many ways he has taken advantage of you.
2. Tell me, what is your concept of a good marriage?
3. Your husband makes you feel inferior in your own eyes. You feel incompetent. In many ways he sounds like a very cruel and destructive man.
4. It makes you furious when you think of the one-sidedness of this relationship. He imposes upon you everywhere, particularly in your own struggle for your own identity. And you don't know where this relationship is going.

#6 HELPEE: I love my children and my husband and I like doing most household things. They get boring at times but on the whole I think it can be a very rewarding thing at times. I don't miss working, going to the office every day. Most women complain of being just a housewife and just a mother. But, then, again, I wonder if there is more for me. Others say there has to be. I really don't know.

HELPER
RESPONSES:

1. Hmm. Who are these other people?
2. So you find yourself raising a lot of questions about yourself--educationally, vocationally.
3. Why are you dominated by what others see for you? If you are comfortable and enjoy being a housewife, then continue in this role. The role of mother, homemaker can be a full-time, self-satisfying job.
4. While others raise these questions, these questions are real for you. You don't know if there is more out there for you. You don't know if you can find more fulfillment than you have.

POST-TEST DISCRIMINATION

#7 HELPEE: I'm so thrilled to have found a counselor like you. I didn't know any existed. You seem to understand me so well. It's just great! I feel like I'm coming alive again. I have not felt like this in so long.

HELPER
RESPONSES:

1. Gratitude is a natural emotion.
2. This is quite nice but remember, unless extreme caution is exercised, you may find yourself moving in the other direction.
3. That's a good feeling.
4. Hey, I'm as thrilled to hear you talk this way as you are! I'm pleased that I have been helpful. I do think we still have some work to do yet, though.

#8 HELPEE: Gee, I'm so disappointed. I thought we could get along together and you could help me. We don't seem to be getting anywhere. You don't understand me. You don't know I'm here. I don't even think you are for me. You don't hear me when I talk. You seem to be somewhere else. Your responses are independent of anything I have to say. I don't know where to turn. I'm just so--doggone it I don't know what I'm going to do, but I know you can't help me. There just is no hope.

HELPER
RESPONSES:

1. I have no reason to try and not to help you. I have every reason to want to help you.
2. Only when we establish mutual understanding and trust and only then can we proceed to work on your problem effectively.
3. It's disappointing and disillusioning to think you have made so little progress.
4. I feel badly that you feel that way. I do want to help. I'm wondering, "Is it me? Is it you, both of us?" Can we work something out? (Carkhuff, 1969)

POST-TEST COMMUNICATION

- #1 HELPEE: Who do you think you are? You call yourself a therapist! Damn, here I am spilling my guts out and all you do is look at the clock. You don't hear what I say. Your responses are not attuned to what I'm saying. I never heard of such therapy. You are supposed to be helping me. You are so wrapped up in your world you don't hear a thing I'm saying. You don't give me the time. The minute the hour is up you push me out the door whether I have something important to say or not. I--uh--it makes me so goddamn mad!
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POST-TEST COMMUNICATION

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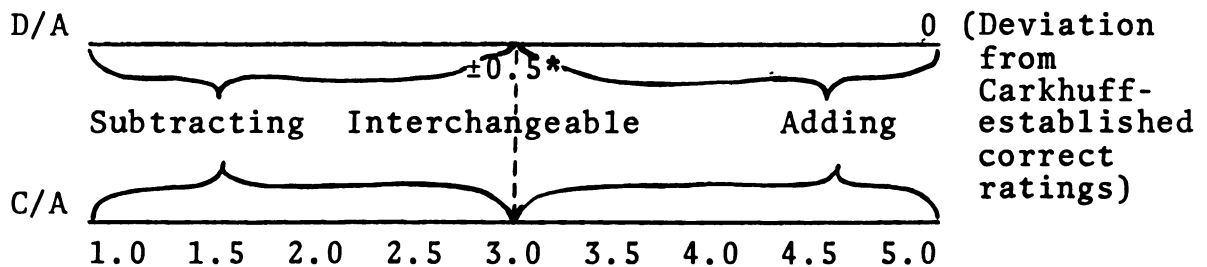
POST-TEST COMMUNICATION

anything I have to say. I don't know where to turn. I'm just so--doggone it I don't know what I'm going to do, but I know you can't help me. There just is no hope.
(Carkhuff, 1969)

APPENDIX D

SCALE FOR EQUATING D/I AND C/I RATINGS

SCALE FOR EQUATING D/I AND C/I RATINGS



*Established as an acceptable deviation from the Carkhuff-established correct rating by Dr. Richard Pierce in a counseling practicum course in 1969 at Michigan State University.

APPENDIX E

PRE-TEST AND POST-TEST RATINGS ON
INDEX OF COMMUNICATION (C/I) BY TWO JUDGES

Pre-Test Rating Sheet--Index of Communication								
Rater A								
<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
1	2.5	1.0	1.0	2.0	1.5	1.5	1.0	1.0
2	3.5	3.0	3.5	3.5	3.0	1.0	3.0	1.0
3	2.0	1.5	3.0	2.0	3.0	1.0	3.0	1.0
4	1.0	3.0	2.5	1.5	3.0	2.0	2.0	2.0
5	1.0	1.0	2.0	2.5	2.0	1.5	1.5	1.0
6	1.0	1.0	2.0	1.0	1.5	1.0	1.0	1.0
7	1.0	2.0	2.0	1.5	2.5	1.0	1.0	1.0
8	1.0	1.0	1.5	1.0	1.5	1.0	1.0	1.0
9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	1.5	1.0	2.0	1.0	2.5	1.0	1.5	1.0
11	1.0	1.0	1.5	1.0	1.5	1.0	1.0	1.0
12	1.0	2.0	1.0	1.5	1.0	1.0	1.0	1.0
13	1.0	1.5	2.0	2.0	1.5	2.0	1.0	1.0
14	1.0	1.0	1.0	1.5	1.0	1.0	1.0	1.0
15	1.0	1.0	1.0	1.0	1.5	1.0	nr	nr
16	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
17	2.0	2.0	3.0	1.5	2.0	2.5	2.0	1.5
18	1.0	1.0	1.5	1.0	1.0	1.0	1.0	1.0
19	2.0	2.5	2.0	1.0	1.5	1.5	1.0	1.0
20	1.0	1.5	1.5	1.5	1.5	2.5	1.0	1.5
21	1.0	1.5	1.5	1.5	1.5	1.0	1.0	1.0
22	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.5
23	1.0	1.0	1.5	1.0	1.5	1.0	1.5	1.0
24	1.0	1.5	1.5	1.0	1.0	1.0	1.0	1.0
25	1.0	1.0	1.0	1.0	1.5	1.5	1.0	2.0
26	1.0	1.0	2.0	1.5	1.5	1.0	1.0	1.0
27	1.0	1.0	1.0	1.5	1.0	1.0	1.0	1.0
28	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
29	1.0	1.0	1.5	1.0	1.0	1.5	1.0	1.0
30	1.0	1.0	1.5	1.0	1.5	1.5	1.5	1.5
31	1.0	1.0	1.5	1.0	1.0	1.0	1.5	1.0
32	1.0	1.0	1.5	1.0	1.5	1.5	1.0	1.0
33	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
34	1.0	1.0	1.5	2.0	1.0	1.0	1.5	1.0
35	1.0	1.0	1.5	1.5	1.5	2.5	1.0	1.0
36	1.0	1.0	1.5	1.0	2.5	2.0	1.0	1.0
37	1.0	1.0	1.5	1.0	2.5	1.0	1.0	1.0
38	1.5	1.0	1.5	1.5	1.0	1.5	1.5	1.0
39	1.0	1.5	1.5	1.5	1.0	2.0	1.0	1.0
40	2.5	3.0	3.0	1.0	3.0	2.5	2.0	2.5
41	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.5
42	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.5

Pre-Test Rating Sheet--Con't

Rater A

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
43	1.5	1.0	1.5	1.0	1.0	1.0	1.0	1.0
44	1.0	1.5	1.5	1.0	1.0	1.0	1.0	1.0
45	1.0	1.0	1.0	1.0	2.0	1.0	1.5	1.0
46	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
47	1.0	1.0	3.0	1.0	1.0	1.0	1.0	1.0
48	1.0	1.0	1.0	1.0	1.5	1.0	1.0	1.0
49	1.0	1.0	2.5	1.5	1.5	nr	1.0	1.0
50	1.5	1.0	1.5	1.5	1.0	1.0	1.0	1.0
51	1.0	1.5	1.5	1.0	1.5	1.5	1.0	1.0
52	1.0	1.5	1.5	2.0	2.5	1.0	1.0	1.0
53	2.0	1.0	1.5	1.5	2.0	1.5	1.0	1.0
54	1.0	1.0	1.5	1.0	1.0	1.0	1.0	2.0
55	1.0	2.0	2.0	1.5	1.0	2.5	1.0	1.0
56	2.0	2.5	1.5	1.0	1.0	1.0	1.0	1.0
57	1.5	1.0	1.5	1.0	2.5	1.0	1.0	1.0
58	1.0	1.0	1.5	1.0	2.0	1.0	1.0	1.0
59	1.0	1.0	1.5	1.0	1.5	1.5	1.0	1.0
60	1.0	1.0	1.5	2.0	1.0	1.0	1.0	1.0
61	1.5	1.0	1.5	1.0	1.0	2.5	1.0	1.0
62	1.0	1.0	1.5	1.0	1.0	1.0	1.0	1.0
63	1.0	1.0	3.0	3.0	2.0	1.0	2.0	1.0
64	1.0	1.0	1.5	1.5	1.5	1.0	1.0	1.0
65	1.0	1.0	1.0	2.0	1.0	1.0	1.5	1.0
66	1.0	1.0	1.5	1.0	1.5	2.0	1.0	1.5
67	1.0	1.5	1.0	1.5	1.0	nr	1.0	1.0
68	1.0	1.0	1.0	1.0	1.5	1.0	1.0	1.0
69	1.0	2.5	2.0	1.0	1.0	1.5	1.0	1.0
70	1.0	1.5	3.0	1.0	2.5	1.5	1.0	1.0
71	1.5	1.0	1.5	1.0	1.0	1.5	1.0	1.0
72	1.0	1.0	1.5	1.0	2.5	1.0	1.0	1.0
73	1.0	1.5	1.5	2.5	1.5	3.0	1.5	1.0
74	2.5	2.0	2.5	1.0	1.5	2.0	1.0	1.0
75	1.0	1.0	2.0	2.0	1.0	2.5	1.0	1.5
76	1.0	3.0	2.5	2.0	1.5	2.0	1.0	1.0
77	1.5	1.0	1.5	1.5	1.5	1.0	1.0	1.0
78	3.0	4.0	2.5	3.5	3.0	2.5	2.5	4.0
79	1.5	1.0	1.5	1.0	1.5	1.5	1.0	1.0
80	1.0	1.0	1.0	1.0	nr	2.5	1.0	1.0
81	2.5	1.5	2.5	3.5	3.5	2.5	2.0	2.0
82	1.0	2.0	2.0	2.0	1.5	1.5	1.0	1.0
83	1.5	1.0	1.5	1.0	1.5	2.0	1.5	1.0
84	1.5	1.5	1.5	1.0	2.0	1.0	1.0	1.0
85	1.5	1.0	2.0	1.0	1.0	1.0	1.0	1.0

Pre-Test Rating Sheet--Con't

Rater A

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
86	1.0	1.0	2.0	1.5	1.5	1.5	1.0	1.0
87	1.0	1.0	1.0	1.0	1.5	2.5	1.0	1.0
88	1.5	1.0	1.0	1.0	1.0	2.0	1.0	1.0
89	1.5	1.5	1.5	1.5	3.0	1.0	1.0	1.0
90	1.0	1.0	1.0	1.0	2.5	2.5	1.0	1.5
91	1.0	1.0	1.0	1.0	1.5	1.0	nr	1.0
92	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
93	1.0	1.0	1.0	1.0	nr	1.5	1.0	1.0
94	2.5	1.0	2.0	1.0	1.5	2.0	1.0	1.0
95	1.0	1.0	1.5	2.0	1.5	2.0	1.0	1.0
96	1.0	1.0	2.0	1.5	3.0	1.0	1.0	1.0
97	1.0	1.0	1.0	1.0	2.0	1.0	1.0	1.0
98	1.5	1.5	2.5	2.5	3.0	2.5	1.5	1.0
99	1.0	1.0	2.0	1.5	2.5	1.0	1.0	1.0
100	3.0	1.5	1.5	1.5	2.5	2.0	1.0	1.0
101	1.0	1.5	1.5	1.5	1.0	1.5	1.0	1.5
102	1.0	1.0	2.0	2.0	1.5	1.0	1.0	1.5
103	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0

Pre-Test Rating Sheet--Index of Communication

Rater B

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
1	1.5	1.0	2.0	1.5	2.0	1.0	1.5	2.5
2	3.0	3.0	3.5	3.0	3.0	2.0	3.0	3.0
3	1.5	1.5	2.5	2.5	3.0	1.0	3.0	2.0
4	1.5	2.0	3.0	2.5	3.0	3.0	2.5	1.5
5	1.0	1.0	2.0	2.0	1.5	1.5	1.0	1.5
6	1.5	1.0	2.0	1.5	1.5	2.0	2.0	1.0
7	1.0	1.5	2.0	1.0	2.0	1.0	2.0	1.5
8	1.0	1.0	2.0	1.5	2.5	1.0	2.0	1.5
9	1.0	1.0	2.0	1.0	1.5	1.0	1.5	1.0
10	1.5	1.0	3.0	1.5	2.5	1.0	3.0	1.5
11	1.0	1.0	2.0	1.5	2.0	1.0	2.0	2.0
12	1.0	1.0	2.5	2.0	2.0	1.0	2.0	1.5
13	1.5	1.0	2.0	2.0	2.0	2.0	2.0	1.5
14	1.0	1.0	2.0	1.5	2.0	1.0	2.0	1.5
15	1.0	1.0	1.5	1.5	2.0	1.0	nr	nr
16	1.5	1.5	2.0	2.0	2.0	1.0	1.5	1.5
17	1.5	2.0	2.0	2.0	2.0	2.0	2.0	2.0
18	1.0	1.0	1.5	1.0	1.0	1.0	1.5	1.0
19	3.0	3.5	3.0	2.0	2.0	1.5	3.0	1.0
20	1.0	1.0	2.5	2.0	2.0	2.0	1.0	1.0
21	1.0	1.0	2.5	2.0	2.0	1.0	2.0	1.0
22	1.5	1.0	3.0	1.5	1.0	1.5	1.0	1.5
23	1.0	1.0	2.5	1.5	2.5	1.0	2.5	2.0
24	1.0	1.5	1.5	1.0	1.5	1.0	2.0	1.0
25	1.0	1.0	1.5	1.0	2.0	1.0	1.0	1.0
26	1.5	1.0	2.0	2.0	1.5	1.0	1.0	1.0
27	1.0	1.0	2.5	2.0	1.0	1.0	1.5	1.0
28	1.0	1.0	1.5	1.0	1.0	1.0	1.0	1.0
29	1.5	1.0	2.0	1.0	1.5	1.0	2.0	1.0
30	1.0	1.0	2.0	1.0	1.5	1.5	2.0	1.5
31	1.0	1.5	2.0	1.0	1.5	1.0	1.5	1.0
32	1.0	1.0	2.0	1.0	2.0	1.0	2.0	1.0
33	1.0	1.0	1.5	1.5	1.0	1.0	2.0	1.0
34	1.0	1.0	2.0	1.5	2.0	1.0	2.0	1.5
35	1.0	1.0	3.0	1.0	2.0	2.0	1.5	1.5
36	1.0	1.0	3.0	1.0	2.5	2.5	2.5	1.5
37	1.5	1.0	2.0	1.0	3.0	1.0	2.0	1.0
38	1.0	1.0	2.5	2.0	2.0	1.0	2.0	1.0
39	1.0	1.0	2.0	1.5	1.0	2.5	1.5	1.0
40	2.5	2.5	3.0	1.0	3.0	2.5	3.0	3.0
41	1.5	1.0	2.5	1.0	2.0	1.0	1.5	1.5
42	1.0	1.0	2.5	1.5	1.5	1.0	1.0	2.0

Pre-Test Rating Sheet--Con't								
Rater B								
<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
43	2.0	1.0	2.0	1.0	1.5	1.0	1.0	1.5
44	1.0	1.0	2.5	1.0	1.5	1.0	1.0	1.5
45	1.0	1.0	2.0	2.0	2.5	1.0	2.5	1.5
46	1.0	1.0	2.5	1.0	1.0	1.0	1.5	1.0
47	1.0	1.5	2.5	1.5	2.0	1.0	2.5	1.0
48	1.0	1.0	1.5	1.0	1.5	1.0	1.0	1.0
49	1.0	1.0	3.0	1.5	2.5	nr	2.0	1.0
50	1.0	1.0	2.0	1.5	1.5	1.0	1.5	1.5
51	1.0	1.5	2.5	1.5	1.5	1.0	1.0	1.0
52	1.0	1.0	1.5	1.0	1.5	1.0	2.0	2.0
53	1.5	1.0	2.0	1.0	2.0	1.0	2.0	1.5
54	1.0	1.0	2.0	1.0	1.0	1.0	2.0	2.0
55	1.0	1.5	2.0	2.0	1.0	1.5	1.5	1.0
56	2.5	1.5	2.0	2.5	2.0	1.0	2.0	2.0
57	1.0	1.5	2.5	2.0	2.5	1.0	2.0	2.0
58	1.0	1.0	2.0	1.0	2.0	1.5	2.0	2.0
59	1.0	1.0	2.5	1.5	1.5	1.0	1.0	1.0
60	1.0	1.0	2.0	1.0	1.0	1.0	1.0	1.0
61	1.0	1.0	2.5	1.5	2.0	2.5	2.0	2.0
62	1.0	1.0	2.0	1.0	1.0	1.0	1.5	1.0
63	1.0	1.0	3.0	2.0	2.5	1.0	3.0	1.5
64	1.0	1.0	2.5	1.5	2.0	1.0	2.0	2.0
65	1.0	1.0	2.0	2.0	1.5	1.0	1.5	1.0
66	1.0	1.0	2.0	1.5	2.5	2.0	2.0	1.0
67	1.0	1.0	2.0	1.5	1.0	nr	1.0	1.5
68	1.0	1.0	1.0	1.0	1.5	1.0	1.0	1.0
69	1.5	2.0	2.0	1.0	1.5	2.0	2.0	1.0
70	1.0	1.5	3.0	1.0	2.0	1.5	3.0	1.5
71	1.0	1.0	1.5	1.0	2.0	1.0	2.0	1.5
72	1.0	1.0	3.0	1.5	2.5	1.0	1.5	1.5
73	1.0	1.5	3.0	2.0	1.0	3.0	2.5	2.0
74	2.0	1.5	2.5	1.0	2.0	1.5	2.0	1.5
75	1.0	1.0	2.0	1.4	2.0	1.5	2.0	1.5
76	2.5	2.0	2.0	1.5	1.5	2.0	2.5	2.0
77	1.5	1.0	2.0	2.0	2.5	1.0	2.0	1.0
78	3.0	3.0	3.0	3.5	3.0	3.0	3.0	3.0
79	1.5	1.0	2.0	1.0	1.5	1.0	1.5	1.0
80	1.0	1.0	1.0	1.0	nr	2.0	2.0	1.5
81	2.0	1.5	3.0	2.5	2.0	2.0	2.5	2.0
82	1.5	1.5	2.5	1.5	2.0	1.0	1.0	1.0
83	1.0	1.0	2.0	1.0	1.5	1.0	1.0	1.0
84	1.5	1.0	2.0	1.0	2.0	1.0	2.5	1.0
85	1.5	1.0	2.0	1.0	1.5	1.0	2.5	1.0

Pre-Test Rating Sheet--Con't								
Rater B								
<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
86	1.0	1.0	2.0	2.0	2.5	1.5	2.0	2.0
87	1.0	1.0	2.0	1.0	2.0	1.5	2.5	1.0
88	1.5	1.0	1.5	1.0	1.0	2.0	1.0	1.5
89	1.5	1.0	2.5	2.0	2.0	1.5	2.0	2.0
90	1.0	1.0	2.5	1.0	2.5	2.5	3.0	1.0
91	2.0	1.0	2.0	1.0	2.0	1.0	1.0	1.5
92	1.5	1.0	1.0	1.0	1.0	1.5	1.5	1.0
93	1.0	1.0	1.0	1.0	nr	1.0	1.0	1.5
94	2.0	1.0	2.0	1.5	2.0	2.0	2.5	1.0
95	1.0	1.5	2.0	1.5	1.5	1.0	1.5	1.0
96	1.0	1.0	2.0	1.0	3.0	1.0	1.0	1.0
97	1.0	1.0	2.0	1.5	2.5	1.0	2.5	1.0
98	1.5	3.0	3.0	2.5	3.0	2.0	3.0	2.5
99	1.0	1.0	2.0	1.5	2.5	1.0	1.5	1.0
100	2.5	2.0	2.0	2.0	3.0	2.0	1.5	1.0
101	1.0	1.0	1.0	1.0	1.0	1.5	2.0	2.0
102	1.0	1.0	2.0	1.5	2.5	1.0	2.5	1.5
103	1.5	1.0	2.0	1.0	1.5	1.5	2.5	1.0

Post-Test Rating Sheet--Index of Communication								
Rater A								
<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
1	1.0	1.0	1.0	3.0	2.0	2.0	1.5	1.0
2	3.0	2.0	1.5	3.0	2.5	2.0	2.0	2.0
3	1.0	1.0	1.0	3.0	2.0	2.0	3.0	1.5
4	2.0	1.5	1.0	3.0	2.0	2.5	3.0	3.0
5	1.0	1.0	1.0	2.5	2.0	1.5	2.0	1.0
6	1.0	1.0	1.0	1.5	1.0	1.5	2.0	1.0
7	nr	1.0	1.0	2.0	1.0	1.0	2.0	1.0
8	1.0	1.0	1.5	2.0	1.0	1.0	1.5	1.5
9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	3.0	1.0	1.0	2.5	2.5	1.0	1.5	1.5
11	1.5	1.0	1.0	3.0	1.5	1.0	1.0	1.0
12	1.5	1.0	1.0	2.5	1.0	1.5	1.0	1.0
13	2.0	1.0	1.0	2.5	1.0	1.0	2.0	1.0
14	1.0	1.0	1.0	1.5	1.0	1.0	1.0	1.0
15	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
16	1.0	1.0	1.5	2.0	1.0	1.5	1.5	2.0
17	3.0	1.0	1.0	2.0	3.0	2.0	2.0	2.0
18	1.0	1.0	1.0	1.5	1.5	2.0	2.0	nr
19	2.0	2.0	1.5	2.0	3.5	3.5	1.5	2.5
20	1.5	1.5	1.0	3.0	3.0	2.5	2.0	3.0
21	1.5	1.5	2.5	2.5	3.0	2.0	2.5	2.5
22	1.0	1.0	1.0	2.5	2.5	2.0	1.5	1.5
23	1.0	1.5	1.5	2.0	1.0	1.0	2.0	3.0
24	3.0	1.0	2.0	3.0	2.5	3.0	1.5	1.5
25	2.0	1.5	1.0	2.0	1.5	3.0	1.0	1.5
26	1.0	1.5	1.0	3.0	1.0	2.0	1.5	1.5
27	1.5	1.0	1.5	2.5	2.0	3.0	1.5	2.0
28	1.5	1.5	1.5	2.0	2.0	2.0	2.0	2.0
29	1.0	1.0	1.0	1.5	1.0	1.0	1.0	1.0
30	1.0	1.0	1.0	2.5	1.0	1.0	1.5	1.0
31	1.0	1.0	1.0	2.0	1.0	1.0	1.5	1.0
32	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.5
33	1.0	1.0	1.0	2.0	1.0	1.5	1.5	1.0
34	1.0	1.0	1.0	1.5	1.0	1.5	1.0	1.5
35	1.0	1.0	1.0	2.0	1.5	1.5	1.5	1.0
36	1.0	1.0	1.0	2.0	1.5	1.5	2.5	1.0
37	1.5	1.5	1.5	3.0	1.5	3.0	3.0	3.0
38	1.0	1.0	1.0	2.0	3.0	2.5	1.5	1.5
39	1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.0
40	3.0	1.0	1.0	3.0	2.5	3.0	3.0	3.0
41	1.0	1.0	1.0	2.5	2.0	2.0	2.5	2.5
42	1.0	1.5	1.5	3.0	3.0	3.0	3.0	1.5

 Post-Test Rating Sheet--Con't

 Rater A

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
43	1.0	1.5	2.0	3.0	3.0	3.0	3.0	1.5
44	1.0	1.0	1.0	2.5	2.5	1.5	2.0	2.0
45	1.0	1.0	1.0	1.5	1.5	2.0	2.0	1.5
46	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
47	1.0	1.0	1.0	2.0	1.5	1.0	1.5	1.5
48	1.0	1.0	1.0	1.0	1.0	1.5	1.0	1.0
49	1.5	1.5	1.0	3.0	1.5	2.0	2.0	1.5
50	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
51	1.0	1.0	1.0	3.0	1.0	1.5	1.5	1.5
52	1.0	1.0	1.0	2.5	1.0	1.0	1.5	1.5
53	1.0	1.0	1.0	2.0	1.5	2.0	2.5	1.5
54	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.0
55	1.5	1.0	1.5	3.0	1.0	1.0	2.5	1.0
56	1.0	1.0	1.0	2.5	1.0	1.5	2.0	1.5
57	1.5	1.5	3.0	2.5	2.0	3.0	1.0	nr
58	1.0	1.5	1.0	1.5	1.0	1.0	2.0	1.5
59	1.5	2.0	1.0	2.5	3.0	3.0	1.5	2.0
60	1.0	1.0	1.0	1.5	1.5	1.0	1.0	1.5
61	1.0	1.0	1.0	3.0	1.0	2.5	1.5	1.5
62	1.0	1.0	1.0	1.5	1.0	1.0	1.5	1.0
63	1.0	1.0	2.5	2.0	1.5	1.0	3.0	3.5
64	1.0	1.0	1.0	2.0	1.5	1.0	2.0	1.0
65	1.0	1.0	1.0	2.5	2.0	2.5	2.5	2.5
66	1.0	1.0	1.5	2.0	1.0	1.5	2.5	1.0
67	1.0	1.0	1.0	1.5	1.0	1.0	1.0	1.0
68	2.0	1.0	1.0	2.5	1.5	1.5	2.5	1.0
69	1.0	1.0	2.0	2.0	1.5	1.5	1.5	1.5
70	1.0	1.0	1.0	1.0	1.5	1.5	1.5	1.5
71	1.0	1.0	1.5	3.0	1.5	2.0	1.5	2.0
72	3.5	1.0	1.0	2.0	1.5	2.5	2.0	3.0
73	3.0	1.5	1.5	3.0	2.0	1.5	2.0	2.0
74	3.0	2.0	2.5	3.0	2.5	2.5	1.5	2.0
75	1.5	1.0	1.5	3.0	2.5	3.0	3.0	3.0
76	3.0	1.0	1.5	3.0	2.5	3.0	3.0	3.0
77	3.0	1.0	1.5	2.5	2.5	2.5	2.5	2.5
78	1.5	1.0	1.0	2.5	3.0	3.0	3.0	1.0
79	1.5	2.5	1.0	2.5	2.5	3.0	3.0	2.0
80	3.0	3.5	1.5	3.5	2.5	3.0	3.0	2.5
81	3.0	3.0	2.0	3.0	3.0	3.5	3.0	3.0
82	2.0	1.0	2.0	3.0	3.0	3.0	2.5	3.0
83	2.0	1.5	2.0	3.0	2.5	2.5	2.5	2.5
84	1.0	2.5	1.0	3.0	2.5	3.0	3.0	3.0
85	1.5	2.0	1.0	3.0	2.0	3.0	3.0	3.0

 Post-Test Rating Sheet--Con't

 Rater A

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
86	1.0	2.5	1.0	3.0	2.0	3.5	2.0	1.0
87	1.0	2.5	1.0	3.0	3.0	2.5	3.0	3.0
88	3.0	3.0	2.0	3.0	2.5	2.0	3.0	3.0
89	2.0	3.0	2.5	2.0	1.0	1.0	3.0	4.0
90	2.5	2.5	1.0	2.0	3.0	3.0	1.5	3.0
91	2.0	1.5	2.0	3.0	2.0	3.0	2.5	2.0
92	1.5	1.0	1.0	1.0	1.0	1.0	1.0	1.0
93	1.0	1.0	3.5	2.5	1.0	2.0	3.0	3.5
94	2.5	3.5	1.5	2.0	1.5	2.5	3.0	2.0
95	3.0	1.0	1.0	3.0	1.5	1.0	1.5	1.5
96	1.0	1.5	1.0	3.0	1.5	1.5	2.0	1.5
97	1.0	1.0	1.0	3.0	1.5	1.0	2.0	1.5
98	1.0	2.5	1.0	3.0	3.0	2.5	3.0	3.0
99	2.5	2.0	2.0	2.5	2.0	2.0	2.0	1.5
100	1.5	1.5	1.5	3.0	2.0	3.0	2.0	3.0
101	1.0	1.0	1.0	2.5	2.0	1.0	3.0	2.0
102	1.0	1.0	1.5	3.5	2.0	nr	3.0	2.0
103	1.5	1.5	1.0	2.0	1.0	3.0	2.0	1.5
104	1.0	1.0	1.0	2.0	1.0	1.5	1.0	1.0

 Post-Test Rating Sheet--Index of Communication

 Rater B

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
1	1.0	1.5	1.0	3.0	1.0	1.0	2.0	1.0
2	1.5	2.0	2.0	2.5	2.0	1.0	1.5	1.5
3	1.0	1.5	1.5	3.0	1.5	1.5	2.0	1.5
4	2.0	1.5	1.5	2.5	1.5	1.5	3.0	1.5
5	1.0	1.5	1.0	2.5	2.0	2.0	1.5	1.5
6	1.0	1.0	1.0	2.0	1.0	2.0	1.5	1.0
7	nr	1.0	2.0	3.0	1.0	1.5	2.0	1.0
8	1.5	1.0	1.5	2.5	1.0	1.0	1.0	1.0
9	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
10	2.5	1.0	2.0	3.0	3.0	3.0	2.5	3.0
11	2.0	1.0	1.5	2.0	1.0	1.0	1.0	1.0
12	1.5	1.0	1.0	2.5	1.0	1.0	2.0	1.0
13	1.5	1.0	2.0	2.0	1.5	1.5	2.0	1.0
14	1.0	1.5	1.5	2.0	1.0	1.0	1.0	1.0
15	1.0	1.0	1.0	1.5	1.0	1.5	1.0	1.0
16	1.5	1.0	2.0	2.0	1.5	2.0	2.0	2.0
17	2.0	1.5	1.0	2.0	3.0	1.5	2.0	2.0
18	1.0	1.0	1.0	1.5	1.5	2.0	1.5	nr
19	2.0	2.0	3.0	2.5	3.0	3.5	2.5	2.0
20	2.5	1.0	2.5	3.0	3.0	2.0	2.5	3.0
21	2.0	2.0	2.0	2.5	3.0	2.0	2.0	2.0
22	1.0	1.0	1.0	2.5	2.5	1.0	1.5	1.0
23	1.0	2.0	3.0	3.0	1.5	1.5	1.0	3.0
24	3.5	2.0	3.0	3.0	3.0	3.0	1.0	2.0
25	2.0	1.5	2.0	2.0	1.5	3.0	1.5	1.5
26	1.0	1.5	2.0	3.0	1.5	1.0	1.5	2.0
27	2.0	3.0	2.0	2.0	2.5	3.0	2.0	2.0
28	1.5	2.0	2.0	2.0	2.0	1.5	2.0	2.0
29	1.0	1.0	2.0	2.0	1.0	1.0	1.0	1.5
30	1.5	1.5	2.0	2.5	1.5	1.0	2.0	1.5
31	1.5	1.0	1.0	2.5	1.0	1.0	1.0	1.5
32	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
33	1.0	1.0	1.0	2.0	1.0	1.5	2.0	1.0
34	1.0	1.0	1.5	2.0	1.0	1.5	1.0	2.0
35	1.0	1.0	1.0	2.0	2.0	1.0	1.0	1.5
36	2.5	1.0	2.5	2.0	1.0	1.0	1.5	1.0
37	3.0	3.0	2.5	3.0	2.0	3.0	1.5	1.5
38	1.5	1.0	2.5	2.0	3.0	2.0	1.0	1.5
39	1.0	1.0	1.5	2.0	2.0	1.5	1.5	1.0
40	3.0	2.0	1.5	3.0	2.5	3.0	3.0	3.0
41	2.0	2.0	2.5	3.0	2.0	3.0	2.5	3.0
42	1.0	3.0	3.0	3.0	3.0	3.0	3.0	2.0

 Post-Test Rating Sheet--Con't

 Rater B

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
43	1.0	2.5	3.0	2.5	2.0	2.5	3.0	2.0
44	1.0	1.0	1.0	2.0	2.0	1.0	1.5	1.0
45	1.0	1.0	1.0	2.0	1.5	1.5	2.0	1.0
46	1.0	1.0	1.0	1.5	1.5	1.0	1.5	1.0
47	1.0	1.0	1.5	2.0	2.0	1.0	1.0	1.0
48	1.0	1.5	1.0	1.5	1.0	2.0	1.0	2.0
49	2.5	2.0	1.0	3.0	3.0	1.5	1.5	1.0
50	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
51	1.0	1.0	1.0	2.5	1.0	1.5	2.0	1.0
52	1.5	1.0	1.0	2.5	1.5	1.0	1.0	2.0
53	1.0	1.5	1.5	2.0	1.5	1.5	2.5	1.5
54	1.0	1.0	1.0	2.0	1.0	1.0	1.5	1.0
55	2.0	1.5	3.0	3.0	3.0	1.0	2.0	1.0
56	1.0	1.0	2.0	2.5	1.0	1.5	1.0	1.0
57	2.0	3.0	3.0	3.0	2.5	2.5	1.0	nr
58	1.5	1.5	1.0	2.0	1.5	1.5	2.0	1.5
59	2.5	2.0	3.0	2.0	2.5	2.0	1.5	2.0
60	1.0	1.0	1.0	2.0	1.5	1.0	1.0	1.5
61	1.0	1.0	1.0	2.5	1.0	3.0	1.0	1.0
62	1.0	3.0	1.0	2.0	1.0	1.0	1.0	1.5
63	1.0	1.0	1.5	3.0	1.0	1.0	3.0	3.0
64	1.5	1.0	1.5	2.5	1.0	1.0	1.5	1.0
65	1.5	2.0	1.5	2.5	2.0	2.5	2.5	2.0
66	1.0	1.0	2.0	2.0	1.5	1.5	1.5	1.0
67	1.0	1.0	1.0	2.0	1.0	1.0	1.0	1.0
68	2.0	1.5	1.0	3.0	2.0	2.0	2.0	1.0
69	1.5	1.5	3.0	1.0	1.5	2.0	1.5	1.5
70	1.0	1.0	1.0	1.0	1.5	1.5	1.0	1.5
71	1.0	1.0	1.0	2.0	1.5	2.0	1.5	2.0
72	3.0	2.0	1.0	3.0	3.0	2.0	1.5	3.0
73	2.5	3.0	2.5	3.0	3.5	2.5	2.0	1.0
74	2.5	2.5	2.0	3.0	2.0	2.5	1.0	1.5
75	2.0	1.0	3.0	3.0	2.5	3.0	2.0	2.5
76	3.0	2.0	2.5	3.0	2.5	3.0	2.0	2.0
77	3.0	2.0	2.5	3.0	2.0	2.0	1.5	2.0
78	2.0	2.0	2.5	3.0	2.5	3.0	3.0	1.0
79	3.0	4.0	2.5	3.0	3.0	3.0	3.0	2.0
80	3.0	3.5	3.0	3.0	3.0	3.0	3.0	3.0
81	3.5	3.0	3.0	3.0	2.5	3.0	2.0	3.5
82	2.0	2.5	2.0	3.0	3.5	3.0	2.0	2.0
83	2.0	2.5	3.0	3.0	4.0	3.0	2.5	2.0
84	1.0	3.0	3.0	3.0	3.5	2.0	2.0	3.0
85	2.5	3.0	3.0	2.5	2.5	3.0	3.0	3.0

 Post-Test Rating Sheet--Con't

 Rater B

<u>Person</u>	<u>Rating</u>							
	1	2	3	4	5	6	7	8
86	1.0	3.0	2.5	3.0	3.0	2.5	2.0	1.0
87	2.5	3.0	2.5	3.0	2.0	3.0	2.0	2.0
88	3.0	2.5	3.0	3.0	3.0	3.0	3.0	3.0
89	3.0	3.0	2.5	3.0	1.0	3.0	2.0	2.0
90	3.0	3.0	1.0	2.5	3.0	2.5	2.0	2.0
91	2.0	2.0	2.0	3.0	2.5	2.5	2.0	2.0
92	1.0	1.0	1.5	1.0	1.0	1.0	2.0	1.0
93	2.5	2.5	2.5	2.0	1.5	1.0	2.5	2.5
94	3.0	3.5	2.0	2.0	2.0	2.5	3.0	1.0
95	1.0	1.0	2.0	2.5	2.0	1.0	2.0	1.0
96	1.5	1.0	1.0	2.5	2.0	1.5	1.0	1.0
97	1.5	1.0	1.0	2.0	2.0	1.5	1.5	1.0
98	2.0	2.0	2.5	3.0	3.0	1.5	3.0	3.0
99	1.5	2.0	2.0	2.0	2.5	1.0	1.5	2.0
100	1.0	1.0	3.5	3.0	2.0	3.5	3.0	2.0
101	1.0	1.0	1.5	2.0	2.0	1.0	1.5	1.5
102	1.5	1.0	2.5	3.0	2.0	2.0	2.0	1.0
103	1.0	2.0	2.0	2.0	1.0	3.0	2.0	2.0
104	1.0	1.0	1.0	3.0	1.0	2.0	2.0	1.0

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