PARTICIPANTS' PERCEPTIONS AND USE OF THE CONTENTS OF WORKING TOGETHER: AN INTERPERSONAL COMMUNICATION SKILLS APPROACH TO TEAM-BUILDING

by

Layne E. Hood
B.S., Manchester College, 1976

Submitted to the Division of Communication Studies and the Faculty of the Graduate School of the University of Kansas in partial fulfillment of the requirements for the degree of Master of Arts.

Redacted Signature

.....
Professor in Charge

Redacted Signature

.....

Redacted Signature

.....

Redacted Signature

.....
For the Department

Abstract

This study assesses participants (n=17) reactions to WORKING TOGETHER (WT), a skills approach to team building that teaches interpersonal competence tools for the work setting. The workshop s 15 skills match the guidelines of several theoretical models for interpersonal competence and effective teamwork in a work organization. Subjects rated their experience with these skills on seven dimensions: 1) their understanding of the skills, 2) their familiarity with the skills, 3) their past ability with similar skills, plus their anticipated ability with the skills after learning about them but before any practice outside the workshop, 4) their plan to use the skills outside the workshop, 5) how much they used the skills, 6) how effective they were with the skills, and 7) how much they observed others using the skills. Nonparametric statistical tests were used to analyze the 255 dependent variables (some of which were repeated measures) and correlations were made between these results and 19 demographic variables. Results indicated that subjects generally evaluated the components of the workshop positively and made use of the skills involved. Further study is recommended using 1) a larger sample size and subjects from different settings, 2) a simpler instrument, and 3) observations of actual use of skills rather than self reported use.

Acknowledgements

Underlying all my work at the University of Kansas was my desire to learn ways to build and facilitate the growth of stronger, more satisfying human relationships. I believe that was also a primary interest of many of the Communication Studies faculty, especially Drs. Paul Friedman, my mentor, Kim Giffin, now retired, Bill Conboy, and Kenneth Johnson. It was the influence of these professors and the many graduate students who struggled along with me through these tough issues that did the most to frame my understanding of how better human relationships grow from greeting to goodbye and beyond. I am honored to acknowledge these great people for providing the inspiration and energy necessary to complete this work.

After the inspiration and encouragements came the sweat and toil for which I acknowledge myself. Finding a place to teach the WORKING TOGETHER program, creating and administering the questionnaires, learning how to be assertive with KU's Honeywell, and building all these charts were all my doing, good or bad. I could not have done this without the loving care from Sally, my wife, Vince and Scott, my friends and confidants, and Paul and Ken my thesis advisors. A simple thanks is much too slim an acknowledgement for their contributions to me in this process. I must also include in this primary support group my good friend and neighbor John Edmonds. He volunteered his time and advise as my personal computer consultant while I processed every word and number found in these pages through his TRS-80 microcomputer.

Among the graduate students in our department who have contributed so much to me and my work, I include Susan Baile and Janene Frahm who

guided me in the direction of Interpersonal Communication Programs, Sherod Miller's organization in Minneapolis which supports the teaching of Couples' Communication world wide, to find a training program predicated on simplicity and the desire to guide learners as far as they wish toward deeper understandings of their relationships. Many other students supported me along the way. Alan Lerstrom, Hazel Rozema, Terry South, Kathy Simmons, Greg Walker, Shashi Khandehar, Carol Nalbandian, Jeanette Tanner, Roz Lomburg, Helga Kelter-Abrahmson, Bob Wells, Jeanette Modrick, Jack Kochenour, Mat Modricin, and many more helped me find my way into and out of many ideas, theories, and lines of research in the broad array of what we now call Communication Studies. They have also helped me build confidence in teaching what I learn.

Still others must be mentioned. Allan Press and Lynn Osterkamp helped me think through the questions I researched. Gail Hamilton, KU's Director of Personnel Training, arranged for me to teach this program to campus staff. Thank you to the authors of WORKING TOGETHER who packaged this workshop that I decided to evaluate. Dallas and Nancy Demmitt first thought of adapting COUPLES COMMUNICATION to the work setting. Sherod Miller, Elam Nunnally, and Daniel Wackman first developed the communication skills and training stategies, thus contributing to hundreds of thousands of human relationships. But a special thanks to Sherod for teaching me and sharing with me two things from his life: his special friendship with Sidney Jourard whose work he has done so much to continue and Paramahansa Yogananda's book, AUTOBIOGRAPHY OF A YOGI, a gentle statement about finding and taking your path. (L.E.H., September 9, 1984)

Table of Contents

Chapter One

Introduction and Literature Review

Interpersonal Competence

In the work setting people develop a variety of interpersonal relationships depending upon the task and social requirements necessary for meeting their organizational objectives. Generally, the better these relationships are, the more effective organizations can be.

Strained relationships between workers will be reflected in employees' attitudes toward one another, the organization, its leadership, etc.. The more serious relationship problems will eventually affect overall productivity, causing the organization to miss deadlines and lose profits or funding. Meanwhile, developing interpersonal competence, i.e., the ability to relate effectively with oneself and others (Bochner and Kelly, 1974), should result in enhancing these relationships. Thus, changes in workers' interaction patterns may affect organizational effectiveness.

Argyris (1962) believes that "to effect changes, organizational, technological and interpersonal factors, will require attention. The interpersonal factors, however, should come first, closely followed by the others (p. 54)." Indeed, he expects organizations to become more effective as a direct result of improving interpersonal competence. Thus, an organization that decides to make changes, either as a corrective or a growthful measure, is advised to develop greater interpersonal competency in its individual members.

Interpersonal competence requires communication competence. Larson, Blacklund, Redmond, and Barbour (1978) have tackled the problem of defining communication competence. They explain that...

> ...communication competence is the ability to demonstrate knowledge of the communicative behavior socially appropriate in a given situation. The word "ability" has been used to indicate the skill or performance necessary for communication. The word "knowledge" indicates those residual rule patterns that are a cognitive part of a communicatively competent person. "Communicative behaviors" is specifically those actions that are carried out through the use of speech. "Socially appropriate" implies the explicit or implicit criteria against which a person is judged. The "given situation" is the context that a person's behavior must reflect. (p. 21)

A competent communicator would have the characteristics identified by Allen and Brown (1976). Larson, et. al., summarize them as follows:

> 1) The exercise of competence depends upon a repertoire of experience, 2) it requires that the individual make critical choices from that repertoire, 3) it is revealed when suitable behaviors are brought to bear in performing desired tasks, and 4) it is sustained when individuals are able to evaluate their performance objectively -- thus, enriching their repertoires of experience. (p. 21)

Essentially then, a competent communicator relies upon his experience to select suitable behavioral means to reach his goals and he remains objective enough to learn from his experience.

Another view is Wiemann's (1976), who describes a "competent interactant" as...

> ...other oriented to the extent that he is open (available) to receive messages from others, does not provoke anxiety in others by exhibiting anxiety himself, is empathic, has a large enough repertoire to allow him to meet the demands of changing situations, and, finally, is supportive of the faces of his fellow interactants present. (p. 7)

"Faces" refers to Irving Goffman's (1967) term, "facework," which means accepting the self as presented by another in an interaction.

While Allen and Brown's definition emphasizes personal responsibility, for choosing behaviors wisely and for learning from experience, Wiemann focuses on an individual's interpersonal responsibility and delineates a sort of interaction etiquette. Bochner and Kelley (1978) have formulated a definition encompassing both perspectives. They say that...

> ...interpersonal competence can be judged by the following three criteria: 1) ability to formulate and achieve objectives; 2) ability to collaborate effectively with others, i. e., to be interdependent; and 3) ability to adapt appropriately to situational or environmental variations. (p. 288)

Each of these definitions also acknowledges the situation or environment as an important feature. A definition combining all three responsibilities -- personal, interpersonal, and situational -- must be used when referring to interpersonal or communication competence at work.

Goldhaber (1979) defines communication in organizations as "the creation and exchange of messages within a network of interdependent relationships to cope with environmental uncertainty (p. 24)." His focus on "interdependent relationships" is consistent with Argyris (1962) who advocates improving interpersonal competence to avoid the destructive splintering inherent in groups working groups, a splintering that results from the struggle between the independence of individuals and the stultifying forces of organizations. Goldhaber points out that skills training is a valuable and practical way to

enhance the interdependent relationships that are essential to organizations. Such training should teach skills in communication competence. This belief is also held by Bochner and Kelley (1978) who assume that:

> 1) Every human being is motivated to interact effectively with the environment; the drive to be interpersonally competent is the drive to influence ones world.
> 2) Individuals are not effective at birth; social effectiveness is learned throughout life. (pp. 286 & 288)

They go on to say that "all training in interpersonal skills should have as its objective the development of interpersonally competent individuals (p. 286)." Training in interpersonal skills is now a traditional part of personnel training in organizations. Indeed, programs to develop these skills constitute an important and popular component of the human resources training field.

Since the pioneering work of Kurt Lewin in group dynamics and social change theory, now almost forty years ago, numerous efforts have been made to train people in organizations to work more effectively together. Before Lewin, Mayo, and others, the major focus in training had been to increase efficiency while ignoring personal satisfaction and the quality of work relationships. Their contribution helped put individual satisfaction and interpersonal relationships at the center of attention.

During the past fifteen or twenty years, many training efforts in work organizations have given emphasis to teaching both human relations skills and task efficiency. This is done to better prepare members of an organization to deal with its various systems: social structures,

technical operations, and even linkages with the external environment. Various theories and training strategies have been used to improve both human relations and productivity at work. They have been used to develop a variety of sensitivity training workshops, leadership and supervision seminars, and team-building interventions. Currently, much training takes an "organizational systems" perspective, eg., Blake and Mouton's grid management techniques, Hersey and Blanchard's situational leadership, and Likert's System IV participative management framework. Programs such as these continue to be used in many in-house training departments, staff development agencies, and continuing education departments that reach out from universities.

Traditionally, management training and organizational development have encompassed many topics. Central to them all is some set of basic interpersonal communication skills. While such basic skills are taught in most management training and organizational development efforts, seldom if ever does a major workshop or training program focus upon them primarily. In fact, a computer search of the literature has shown that in recent years no evaluation of such a basic skills program has been reported. Perhaps this reflects the difficulty of measuring proficiency in such skills or of observing any direct impact that acquiring these skills may have on production.

Nonetheless, interpersonal communication skills are recognized by work groups and managers as a matter of continuing importance. For example, a recent survey* of graduates of a supervisory skills training workshop held exclusively for members of the University of Kansas administrative staff indicated that training in communication skills

was a top priority among desired topics for additional training.* It was this finding that led to implementing the training program being investigated in this study.

The Working Together Program

WORKING TOGETHER (WT) (Miller, Wackman, Demmitt, and Demmitt, 1980) is a training program designed to teach basic interpersonal skills to general audiences, eg., individuals who work independently at virtually any level in an organization, as well as teams of workers representing one or more hierarchical levels. This training purports to be of use to individuals who, even independent of their organization, want to enhance their interpersonal effectiveness, either as a subordinate, a co-worker, a supervisor, a team leader, or a public representative of the organization. At the same time, a supervisor or a team leader at any organizational level might rely on this program for subordinate or team training.

WT centers around interpersonal conflict and its management. The main point is that conflicts, or "issues" as the text refers to them, result from situations in which someone's experience of an interaction fails to meet his expectations. This person ends up feeling misunderstood. When this is seen as a problem the solution is to seek mutual understanding. Participants of WT learn how to improve their

------(Footnote)

*Gail Hamilton, Director of the University of Kansas Personnel Training Office, conducted this survey and reported these results in personal conversation.

ability to achieve this solution. The glossary in Appendix A defines the WT content elements, the skills taught to resolve conflicts. The goals to which these skills apply include: 1) increasing ones self awareness and learning to express oneself appropriately (content elements 1-3); 2) increasing ones awareness of others and learning how to verify ones understanding of them (elements 4-8); 3) understanding the purpose of a variety of interaction styles and how to be effective in one's own purpose by being flexible in one's style (elements 9-10); and 4) appreciating the value of self-esteem and esteem for others, and learning how to convey this through one's usual exchange of messages with people encountered at work (element 15).

Skills for Interpersonal Competence

The basic interpersonal communication skills training offered in WT matches the behavioral recommendations of the three models of interpersonal competence, those designed by Argyris, Wiemann, and Bochner and Kelly.

Argyris (1965a, 1965b, & 1965c) claims that the increased use of three interpersonal behaviors will result in establishing more firmly the necessary climate for increasing both interpersonal and organizational effectiveness. Decreased use of these behaviors would likely limit or produce a decline in effectiveness. Argyris says that one should: experiment in interactions, show openness in communication, and demonstrate owning of ideas and actions. In addition, everyone should help others behave this way. Eventually, the social climate should change due to increases in: 1) trust due to

experimenting, 2) concern due to openness, and 3) individuality due to owning ideas and actions.

Most of WT's content elements fit into one or more of Argyris' three behavioral categories. Mutual experimenting behavior is related to all of the fifteen elements, but especially to 1) the "shared meaning process," 2) "styles of communication," 3) "flexibility in using styles," 4) "contracting to work through an issue," and 5) "trouble shooting." Mutual openness is accomplished through 1) "speaking for self," 2) "using your awareness wheel," and 3) all of the listening skills (4-8 in the glossary), but especially, "observing and listening," "acknowledging," and "inviting." Mutuality in owning ideas and actions is accomplished by 1) "speaking for self," 2) "using your awareness wheel," 3) "documenting interpretations," 4) "checking out," 5) the "shared meaning process," 6) "trouble shooting," and 7) "building self and other esteem." Overall, by definition and intended function the WT skills are consistent with interpersonal competence as measured by Argyris' climate indicators.

In a slightly different model of interpersonal competence, Wiemann (1976) identifies five dimensions of communicative competence. The first dimension, "affiliation/support," is likely to result from the use of the following WT content elements: 1) the "shared meaning process," 2) "contracting to work through an issue," and 3) "building self and other esteem." The second dimension is "social relaxation." Contributing to it are the "shared meaning process" and "flexibility in using styles." "Empathy" is the third dimension and it is the expected result of using the five WT listening skills (numbered 4-8 in the

glossary). "Behavioral flexibility" is the fourth dimension and it clearly matches the WT element called "flexibility in using styles." Also contributing to this dimension are 1) "using your awareness wheel," 2) the "styles of communication," 3) "contracting to work through an issue," 4) "trouble shooting," and 5) "building self and other esteem." Finally, the fifth dimension includes "interaction management" skills implemented in the "initiation and termination of encounter, the allocation of speaking turns, and control of topics discussed." (Wiemann, 1976, p. 8-10) Although this idea is not addressed explicitly in WT, the appropriate and effective use of the expression and listening skills would obviously contribute to interaction management. These include: 1) "speaking for self," 2) "documenting interpretations," 3) the five listening skills (4-8 in the glossary), and 4) the "shared meaning process." In addition, interaction management is an apparent by-product of using 5) the "styles of communication," 6) "flexibility in using styles," 7) "contracting to work through an issue," and 8) "building self and other esteem." In this way, it appears that Wiemann's conception of interpersonal competence is related to the WT content elements.

A third model of interpersonal competence comes from Bochner and Kelly (1974). They list five basic communication behaviors: 1) empathic communication, 2) descriptiveness (referring to the giving and receiving of feedback), 3) owning feelings and thoughts, 4) self disclosure, and 5) behavioral flexibility, i.e., "an individual's capacity to relate in new ways when necessary."

Several WT content elements are subsumed under each of these five behaviors. Primarily contributing to "empathic communication" are the five listening skills (4-8 in the glossary). The four elements contributing to "descriptiveness" are 1) "speaking for self," 2) "documenting interpretaions." 3) "checking out," and 4) the "shared meaning process." The elements contributing to "owning feelings and thoughts" obviously include, 1) "documenting interpretaions," but also, 2) "speaking for self," 3) "using your awareness wheel," and 4) "building self and other esteem." Three elements contribute directly to "self disclosure:" 1) "speaking for self," 2) "using your awareness wheel," and 3) "documenting interpretaions;" two others contribute here more indirectly, 4) "checking out" and 5) "building self and other esteem." Having "flexibility in using styles" obviously contributes to "behavioral flexibility" but so does using 2) the "styles of communication," 3) the "shared meaning process," 4) "contracting to work through an issue," and 5) "building self and other esteem." In this way, most of the WT content elements seem to be implied by the five behavioral components of the Bochner and Kelly model of interpersonal competence.

These illustrations offer some theoretical support for the prospect that the WT content elements if applied in work settings would indeed lead to the interpersonal competence required for more effective work relationships which, in turn, might improve organizational effectiveness.

Skills for Team-Building

The content elements of WT also equip this training program to meet the special needs of people working in teams. In addition to WT's four basic interaction strategies the authors include a problem solving and planning model designed to teach effective methods for groups to make decisions and take actions.

These skills can help expand and clarify an entire team's awareness as it confronts problems concerning not only its tasks and member relationships, but also the way it relates to other teams and to the organization.

Beyond this, the program teaches ways 1) to brainstorm and select suitable solutions, 2) to plan for accomplishing the best solution, and 3) to evalute the effectiveness of the entire problem solving effort only to begin the whole process again if necessary. The effectiveness of this approach is expected to improve how effectively each member can apply all the other WT skills. Indeed it follows that increased interpersonal competence would enhance team competence.

The WT problem-solving strategy is especially designed for task-oriented groups. It is called "mapping an issue" and appears to meet the special needs of work relationships in two major ways. First, the procedure closely follows a widely accepted and basic series of problem-solving steps: 1) understanding the purpose and desired outcomes of the individual or group, 2) defining the problem, 3) brainstorming possible solutions, 4) selecting the best solution, 5) planning to carry it out, 6) accomplishing the planned action, and 7) evaluating the outcome. While following these steps, numerous side

issues are bound to arise as Roark and Wilkerson (1979) explain:

> ...conflict may exist over resources, methods to achieve goals, and incompatible goals. Conflicts also may exist because of a struggle between two or more parties or they may exist to enhance the position of one of the parties in another situation. (p. 441)

"Mapping issues" is well suited not only for working through team tasks, but also for confronting relationship issues as they arise in the process. It incorporates the important steps of conflict management, namely: 1) each party describes his/her own position and that of others, 2) parties share feelings and avoid blaming, 3) an outsider helps parties describe acceptable desired outcomes, 4) parties list the changes that each is willing to make, and 5) parties set an agenda for making changes being sure to include a follow-up plan. (Roark and Wilkerson, 1979, p. 448) Thus, WT in its entirety seems well suited for team-building interventions.

Reilly and Jones (1974) claim that, "Team-building aims at improving problem solving ability among team members...;" they list ten subgoals.

> 1. A better understanding of each team member's role in the work group;
>
> 2. A better understanding of the team's character, its purpose and role in the total functioning of the organization;
>
> 3. Increased communication among team members about issues that affect the efficiency of the group;
>
> 4. Greater support among group members;
>
> 5. A clearer understanding of group process--the behavior and dynamics of any group that works closely together;
>
> 6. More effective ways of working through problems inherent to the team--at both task and interpersonal levels;

7. The ability to use conflict in a positive rather than a destructive way;

8. Greater collaboration among team members and the reduction of competition that is costly to individual, group, and organization;

9. A group's increased ability to work with other work groups in the organization; and

10. A sense of interdependence among group members.

Insofar as WT appears capable of contributing to each of these subgoals, it is expected to contribute to the final outcome of team-building, i.e.,

> ...a more cohesive, mutually supportive, and trusting group will have high expectations for task accomplishment and will, at the same time, respect individual differences in values, personalities, skills, and idiosyncratic behavior. Successful team-building should nurture individual potential. (Reilly and Jones, 1974, p. 228)

Beyond this, it appears probable that the WT strategies for interpersonal and teamwork competence would contribute to developing the twelve distinctive features of effective work teams as determined by Francis and Young (1979). Specifically, WT could influence 1) the appropriateness of leadership, 2) the suitability of membership, 3) the committment of the team, 4) the constructive quality of the climate, 5) the concern to achieve, 6) the clarity of the organizational role, 7) the effectiveness of work methods, 8) the organization of team procedures, 9) critiquing with rancor, 10) developing individuals, 11) the creative strength, and 12) the positive quality of intergroup relationships.

In summary, when WT is compared to these standards of good team development, it appears to have the necessary components to contribute to effective teamwork: first through developing interpersonal competence then by adding a thorough problem solving strategy. Workers who grow on both of these levels should contribute, in turn, to more effective organizations.

Related Research

The authors of WT, Miller, Wackman, Demmitt, and Demmitt (1980), wanted to build upon the success of another training program, COUPLES COMMUNICATION (CC), and address a new context, the work organization. CC was developed by authors Miller, Wachman, and Nunally (1975, 1979, and 1981) for the purpose of teaching couples the skills for improving both their interaction awareness and empathic awareness (Miller, 1971; Nunally, 1971).

Twenty studies of the effects of CC, spanning from 1971 to 1979, have been collected by Wampler (1982). In her consolidation of these findings, Wampler concludes that CC is "an effective program in teaching communication skills to couples." She finds that the program itself seems to account for its effects "rather than non-specific factors such as attention to the couple's relationship or to unique skills of particular instructors" (p. 351-352). She adds that skill use declines after the freshness wears off, although usually, not all gains are lost. She says that:

> When only the best-designed and well-executed studies are considered, CC apears to have positive impact on both communication quality and relationship quality which persists

> after the immediate impact of the program has faded. This conclusion must be qualified, however, in that several studies found no positive effects in these areas, or positive effects with some measures and not with others. In the only other areas receiving much research, self-esteem and self-disclosure, CC appears to have no positive effect. (emphasis added) (p. 352)

Wampler recommends that, "Future studies need to examine the effects of the components of CC rather than the program as a whole (emphasis added)." She points out that much research must be done on the program.

To summarize Chapter One, WT seems well suited to serve both communication educators and consumers with important results for the workworld. Research should be undertaken to determine whether WT graduates improve their interpersonal competence and whether the training has any effect on their teamwork and productivity. This study takes the first step in that process by assessing workshop participants' perceptions and use of WT content elements.

Chapter Two

Statement of the Problem and Methods

WORKING TOGETHER (WT) has not been systematically studied. Its predecessor, COUPLES COMMUNICATION (Miller, et al., 1979), has been found to have an impact upon "communication quality" and "relationship quality" for workshop participants (Wampler, 1982). Because of the similarity of these two workshops, it can be expected then that WT will have the same impact. Assuming that it does, then WT should both enhance communication competence and improve teamwork as suggested in Chapter One. The question now is what attitudes do workshop participants develop toward the WT content elements during the training itself, and how much do they use the program material outside the class setting. These general queries are sensitive to Wampler's suggestion that the components of the program ought to be studied. More formally, the research question is:

> How do participants perceive and use the content elements of WT?

Fifteen content elements have been defined (see Appendix A for glossary) through a procedure described in chapter one. Seven specific questions were developed to answer the one just stated. Subjects were asked to rate each element with respect to each one. The specific questions are:

1. How well do workshop participants think they understand each content element following its presentation?

2. Is the basic idea of each content element new to participants?

3. How well do participants believe they can use each content element, first, based upon their ability before the workshop, and secondly, based upon their anticipated ability just after the presentation of the idea but before applying it outside the workshop?

4. How much use do participants plan to make of each content element after its presentation?

5. How much do participants report having used each content element at three intervals following its presentation?

6. How effectively do participants think they have used each content element at three intervals following its presentation?

7. How much do participants observe others with whom they work using each content element at three intervals following its presentation?

The answers to these questions should not only indicate what value WT has for teaching people how to improve their communication and team work, but also suggest further research.

Evaluating WT's components can be done in several ways. Bochner and Kelly (1974) propose that interpersonal skills can be measured from at least three vantage points: 1) self-ratings, 2) peers rating peers, and 3) ratings made by trained, objective observers or interviewers. Self-ratings, of course, are the most subjective. But while more objective evaluations would no doubt strengthen research conclusions, self-ratings have been selected for three reasons: 1) the nature of

the training program and its components, 2) the composition of the sample population, and 3) some special limitations of field research.

Some WT content elements refer to skills that are not easily observed, at least not without highly trained research assistants. Yet, using trained observers for this study was simply not practical. Doing so would have been difficult to manage and unnecessarily intrusive, whether in the workshop itself or on the worksite. Training coworkers to observe behavior would have caused the same problems but it was actually impossible, since workshop participants were not identified ahead of time. Therefore, this study relies on self-ratings even though self-reported use of WT skills does not necessarily mean that one will or even can actually exhibit the behaviors.

While the use of interviews might have clarified the data somewhat, it was also thought to be too impractical and intrusive. Instead, a written survey was developed. It incorporates the seven research questions as rating criteria for subjects to use in recording their perceptions and use of each content element. These ratings, including repeated measures, were requested at several times during and after the workshop. Subjects also answered a number of demographic questions.

A preliminary study was done to help develop this survey. It purpose was to identify what workshop participants would say are the WT content elements. Subjects were also asked to indicate how much they used each element.

The following section discusses the preliminary study. Section two describes the survey and its 12 questionnaires. A third section discusses the administration of these questionnaires. The sample population is described in section four. Finally, the chapter concludes with a description of data analysis procedures.

I. Preliminary Study

The preliminary study answered the following questions:

What do participants perceive to be the discrete content elements of WT?

What content elements do participants perceive as new and/or useful?

In February, 1981, the University of Kansas Personnel Training Office (PTO) sponsored a WT workshop. Fourteen non-faculty KU staff members, all of whom worked in different offices, met for five sessions which were staggered over two and one-half weeks. The PTO collected some basic information from participants. They represented a fairly balanced cross section of middle management within this large organization. Most of them were supervisors representing a wide range of ages and both sexes equally.

Two different questionnaires were used during the workshop.

1. At the end of sessions one through four subjects were asked, "What things from today's session will you want to try in the few days between now and the next session?"

2. At the start of sessions two through five they were asked, "What things from the last session did you use in your job? If they were effective, please describe how."

Responses to these questions fit into two categories: 1) the number of times an element was mentioned immediately after its presentation session and 2) the number of times it was mentioned after participants had a chance to use it. Figure 2.1 charts the number of times participants referred to each content element on the questionnaires. Time constraints and logistical problems prevented the collection of the data missing in Figure 2.1.. Each content element that was mentioned at least once, plus those that subjects had no opportunity to mention were included in the main study. All of these are defined in Appendix A.

At the end of the workshop, subjects were given the author's list of nineteen WT content elements (see Appendix A). They were asked to indicate whether each was something they had known before or if it was something about which they had learned in the workshop.

Two subjects identified all nineteen elements on the authors' list as new ideas. Another four described three-fourths or more as new. One subject reported familiarity with eleven elements and another five put a third of the elements in this category. How these elements were distributed is less important than the fact that some were more familiar to some subjects than to others. With no reason to believe that subjects for the present study would differ from these participants, it was decided that the present survey should ask about the relative newness of each element.

The preliminary study revealed another phenomenon of importance in developing the final survey. Some subjects were clearly reporting

Fig. 2.1. Frequency of Subjects' References to WORKING TOGETHER Content Elements* in the Preliminary Study (n=14).

Content Elements	just after presentation	a few days later
1. speaking for self	3	2
2. using your awareness wheel	19	10
3. documenting interpretations	9	4
4. observing and listening	7	7
5. acknowledging	4	1
6. inviting	7	9
7. checking out	7	4
8. shared meaning process	6	2
9. styles of communication	11	12
10. flexibility in using styles	4	0
11. mixing messages	1	0
12. mapping an issue	(no)	14
13. contracting to work through an issue	(data)	1
14. trouble shooting	(no data)	
15. building self and other esteem	(collected)	

*Each element is defined in Appendix A.

their own attitudes and actions with regard to the workshop skills, while others were, for some unknown reason, describing the use of content elements by other people at work. As a result, it was decided to distinguish between workshop participants' own use and their observation of others' use of the WT content elements.

In summary, the preliminary study helped to clarify the content elements which should be measured in this study, and it suggested two research questions covering subjects' "familiarity" with and "observations of others' use" of elements, for the final survey.

II. The Survey

The survey instrument used in this study has two major parts. First, participants give demographic information concerning their work situation and personal characteristics. Then, they evaluate the WT content elements. Below is a description of both parts and their development.

A. Demographic Questionnaire: The creation of this part of the survey focused on two basic areas that might relate to the WT contents: the important aspects of common work interactions, both personal and situational, and participants' attitudes regarding work communication. The importance of these areas emerged from a general review of literature on organizational communication and out of personal experiences with people at work or in training workshops. The resulting questionnaire* includes three general categories of questions.

------(Footnote)

*The demographic questionnaire appears in Appendix B, while Appendix D summarizes characteristics of the research sample.

First, subjects provide information about their role relations and how they distribute their time. They are asked how long they have had their current job, how many supervisors, subordinates, and peer coworkers they have, what percentage of time they spend with each of these groups, and what proportion of their contacts at work are first encounters. The actual questions were asked as follows.

1. How long have you been in your present job position?

2. If you have ever before held a similar job position, how long were you in it?

3. For how many employees are you the main supervisor?

4. For how many employees do you provide for less than half their supervison?

5. How many people serve as your superiors?

6. How many people do you work with who are neither your superiors nor your subordinates (this included all coworkers not included in the three immediately preceding questions)?

10. What proportion of your time do you work alone versus with others?

11. Of the time you work with others, what percent is spent with subordinates, superiors, peers (coworkers in your unit), or with people not in your unit (other workers, consumers, etc.)?

20. To what extent are the people you contact at work the same every day versus new to you?

Subjects were also asked to what extent they are self-directing, how much their supervisor structures their work, and how much they structure the work of their subordinates.

12. What proportion of your work is decided by you versus directed by someone else?

13. If you are a supervisor, to what extent do you tell your subordinates what to do versus let your subordinate do their work as they think best?

14. What proportion of the work assignments you get are highly structured (detailed, regulated, etc.) versus unstructured (general, flexible, etc.)?

15. What proportion of the work assignments that you give are highly structured versus unstructured?

In the second category, subjects answered questions regarding their attitudes toward interpersonal communication at work. They were asked about their relative ease in talking through problems at work, how important dealing with people is to their success, how free they feel to speak their mind at work, how their enjoyment of dealing with people compares to other aspects of their work, how satisfied they are with their human relations competence at work, and to what extent they prefer to plan their work.

16. Is talking through the problems that arise at work usually more difficult or easy for you?

17. How important is how you deal with people to the success of your work?

18. To what extent do you feel free to speak your mind on the job (question, disagree, suggest ideas, etc.)?

19. How much do you enjoy dealing with people at work compared with other aspects of your job?

21. How satisfied are you with how well you deal with people at work?

22. When you do your work, how much do you prefer planning ahead versus responding on the spot?

The third category of questions asked subjects' about their previous communication training and motivation in coming to this

workshop. They were asked how much communication instruction they had had, how recently, and whether they were familiar with any of the authors' published works or workshops. Finally, they were asked how motivated they were about coming to the WT workshop.

> 8. Have you attended other communication workshops or classes? If so, how many? Was the last one within the last six months or the last year?
>
> 9. Have you ever attended a "couples communication" workshop? Have you ever read either ALIVE AND AWARE, TALKING TOGETHER, or STRAIGHT TALK (all books by the WT authors)?
>
> 7. Did you ask or were you asked to come to Working Together?
>
> 23. Did you come to the Working Together workshop more eagerly versus reluctantly?

B. Evaluation Questionnaires: This part of the survey used the seven research questions for subjects to evaluate their perceptions and use of the 15 WT content elements. Subjects completed 11 questionnaires over a span of more than eight weeks beginning at the very start of the two and one-half week workshop and ending six weeks after the final session. Respondents were required to evaluate each element for each question, and to do so repeatedly for questions one, five, six, and seven. (See Appendix B for samples of questionnaires and completion instructions.) The logistics of administering these questionnaires is explained in the next section.

The list of 15 WT content elements was developed using three sources of information. First, two University of Kansas graduate students studying interpersonal communication reviewed the WT text and

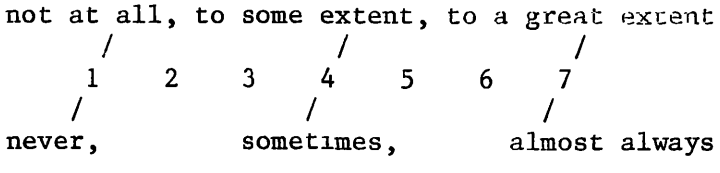
were asked what elements workshop participants might distinguish. Second, one of the authors, Dr. Sherod Miller, was asked by telephone what he expected participants to identify as elements. Third, in the preliminary study, workshop participants were asked to identify the important elements. The final 15 were derived from integrating all three sources of information.

These 15 content elements do not correspond directly to the 19 skills, procedures, and frameworks (conceptual models) that are specifically developed in the WT text (see Appendix A for both lists). The author, Dr. Miller, had expected participants to identify the text's 19 items as the basic content elements. However, the opinions of the graduate students and the preliminary study results recommended the modifications reflected in the final list. These sources suggested that the "awareness wheel" only constituted one content element, even though the text originally presents it as both a framework and a set of five expression skills. This change reduced the author's list by five. Next, one element not identified by the authors was added. In the opinion of the graduate students and respondents to the preliminary study, "mixing messages" was a distinct content element to be included in the survey.

The seven research questions were determined in part by consulting with university teachers who use teaching methods similar to the experiential ones used for WT when they teach interpersonal communication in classroom or workshop settings. Questions two and seven, specifically, were solely recommended by the preliminary study (see the preceeding section in this chapter). Together, the questions

were designed to collect what Kirkpatrick (1975) considers to be the four types of important evaluation information: 1) participants' reactions to the training session or program. 2) participants' learning during the program as indicated by some measure of understanding, 3) actual changes in participants' behavior as reported by participants or, when practical, by observers, and 4) the results of behavior changes as evaluated by participants, or when practical, by observers.

The research questions asked subjects about their levels of 1) "understanding," 2) "familiarity," 3a) "remembered ability," 3b) "anticipated ability," 4) "planned use," 5) "use," 6) "effectiveness," and 7) "observations of others' use" with respect to each of the content elements. (These questions are written out fully on page 17.) A standard seven-point scale was used for subjects to rate their experience with the content elements with respect to each of these dimensions. This scale is considered to have equal appearing intervals that constitute ordinal data on which nonparametric statistical procedures could be done. Scale numbers one, four, and seven were assigned words as guides for subjects in rating the extent or frequency of their experiences with content elements:



The complete survey, then, includes a demographic questionnaire followed by a series of evaluation questionnaires, and is designed to measure subjects' perceptions and use of the fifteen content elements.

III. Administering the Survey

The complete survey includes twelve questionnaires. Each was administered in a timely way so that subjects' ratings of content elements could be collected at the following times: 1) at the close of the workshop session during which each element was introduced, 2) just a few days after subjects had a chance to use an element outside the workshop, 3) a few days after the close of the fifth and last session, and 4) six weeks later. Workshop sessions were staggered every few days over a two and one-half week period. Since only a few elements were introduced in each session, the second rating usually occurred at the beginning of the following session except for the two elements introduced in the fifth session whose second rating was the same one as its third.

Subjects were asked at the beginning of the first session if they were willing to participate in the survey and commit themselves to completing all the questionnaires. At that time, subjects also completed the demographic questionnaire.

The research questions asked subjects about their levels of 1) "understanding," 2) "familiarity," 3a) "remembered ability," 3b) "anticipated ability," 4) "planned use," 5) "use," 6) "effectiveness," and 7) "observations of others' use" with respect to each of the

content elements. These questions were distributed on the questionnaires so that numbers one, two, three (both parts), and four all applied to the first rating of each element. Questions one, five, six, and seven were asked at the second, third, and fourth rating times. Thus, question one, "understanding," was asked four different times supplying the most continuous measure of subjects' perception of the WT skills. Questions two, three (both parts), and four were asked only once to measure subjects learning experience in the workshop itself without the benefit of on-the-job applications of these skills. Finally, questions five, six, and seven were asked three times to measure subjects' skill use in their day-to-day environment to see if its frequency and effectiveness changed over time and if others in the work setting were observed using the skills.

Since the WT content elements were introduced in different sessions and the first and second measurements occurred at different times throughout the entire workshop, it will help to explain in more detail when each questionnaire was used and what it measured. Appendix B includes all 12 questionnaires complete with instructions. Figure 2.2 charts the administration of each one. The first was for demographic information and was given to subjects with a cover letter at the very beginning of the workshop. The cover letter served as an orientation to the study and a permission slip. Questionnaire number two was handed to subjects at the end of the first session for them to rate the first three content elements, the only ones to which they were exposed at this point, on the first four questions. These three elements were rated again at the begining of the second session, only

this time subjects were asked questions one, five, six, and seven. At the end of this second session, after the next five elements were introduced, subjects were asked to rate elements four through eight with respect to questions one through four. These five elements were rated next on questionnaire number five at the beginning of the third session when questions one, five, six, and seven were asked. This pattern was followed throughout the workshop with the set of content elements that were introduced in each session. Thus, questionnaires one through ten were administered throughout the workshop, one at the beginning and the end of each session. By the end of the workshop, each content element had been rated twice except the two elements introduced in the last session.

After the workshop was finished, subjects completed questionnaire number 11 on which they were asked to rate all 15 content elements with respect to questions one, five, six, and seven. Finally, the same questions were asked again six weeks later on questionnaire number 12 which also included all 15 elements.

A common instruction sheet was handed out with each evaluation questionnaire to ensure the collection of consistent data. In addition, each element was defined in glossary style on each questionnaire where it appeared. Finally, questionnaires 11 and 12 were introduced to subjects by a cover letter since they would complete them away from the workshop and at a later date. The cover letter reoriented subjects to the study and explained how to return their completed questionnaires.

Fig. 2.2. Administration of Questionnaires (Q#2 through Q#12)* and the Pattern of the 15 WORKING TOGETHER Content Elements (CE#1 through CE#15)** as They Appeared on Them.

	Timing of Administration			
Grouping of Elements	immediately following introduction of content elements	after a few days trial use	a few days following the end of the workshop	six weeks after the end of the workshop
CE#1 - CE#3	Q#2, end of session one	Q#3, beginning of session two		
CE#4 - CE#8	Q#4, end of session two	Q#5, beginning of session three		
CE#9 - CE#11	Q#6, end of session three	Q#7, beginning of session four		
CE#12 & CE#13	Q#8, end of session four	Q#9, beginning of session five		
CE#14 & CE#15	Q#10, end of session five	combined with Q#11		
CE#1 - CE#15			Q#11, after end of workshop	
CE#1 - CE#15				Q#12, after end of workshop

*Appendix B includes all 12 questionnaires numbered as they are used in this chart. Questionnaire #1 is the demographic one and is not included in this chart.

**The glossary in Appendix A numbers the content elements as they are used in this chart.

The first 10 questionnaires were handed to subjects in the workshop itself and collected before the end of the session. Questionnaires number 11 and 12 were sent and returned through the mail. Only 46%, or 17 of 37 workshop participants completed the full set of questionnaires, thus constituting the subjects referred to throughout this report. This return rate can be attributed to the fact that more than half of the workshop participants either attended erratically or were unwilling to complete the questionnaires. The first group met in July when many particpants were affected by the pressures of staff vacations and preparing for the start of fall term. Absences in the September and October groups were due to illness or personal business. Only two participants refused outright to complete the survey.

IV. The Research Sample

The subjects in this study were all University of Kansas employees. Their staff development service, the KU Personnel Training Office (PTO) sponsored three WT workshops (in addition to the one in the preliminary study) and cooperated in conducting this research. The PTO director recruited participants, provided a training room with training materials, and awarded graduation certificates to employees who attended all five sessions, that acknowledged their accomplishment and were placed in their personnel file (a standard PTO procedure to encourage staff to attend all sessions of a training program).

All trainees had attended a PTO supervisory skills workshop within two years prior to the summer of 1981. In that workshop, many

requested a follow-up workshop dealing more specifically with interpersonal communication skills. None of the subjects who actually completed the survey had had previous exposure to any workshops or publications by the authors of WT. About a third, six of 17, had attended other communication workshops within the previous year, only one of these had happened within six months of WT.

Attendance at these three workshops was 17 in July, 11 in September, and nine in October. Of the 37 total participants, only 46%, or 17, completed all 12 questionnaires.

This total was much smaller than expected, especially when broken down into seperate workshop groups. There were only three subjects from July, eight from September, and October had just six. Therefore, the data needed to be pooled. To start, each of the three July subjects was arbitrarily assigned to one of the other two groups. It was assumed that random assignment of these three would not skew the means from either of the other two groups. This step created one group of 10 subjects and one of seven. To determine whether they could be pooled, further analysis was required.

Statistical analysis compared subjects' ratings for content elements in each of the two groups. Mann-whitney U tests revealed 17 significant ($p<.05$) differences among 255 comparisons. Each of these was tested further to see if it correlated with some demographic characteristic that would explain their different ratings. Spearman rho correlations showed that at least one demographic feature was significantly ($p<.05$) related to all but three of the ratings

differences. Analysis suggested that all 14 correlations could be attributed to the demographic factors involved. This left only three cases that could not be explained (see Appendix C for a full discussion): 1) subjects' "understanding" of "documenting interpretations" at the end of its introductory session, 2) subjects' "effectiveness" when using "contracting to work through an issue" six weeks after the end of the workshop, and 3) subjects' "observation of others' use" of "mixing messages" a few days after the end of the workshop. These three must be considered exceptions to data pooling and subjects' ratings for these three content elements have been excluded from analysis.

Hence, it can be said that the two workshop groups represent the same population on all but three dependent variables. Consequently, only these three have been excluded from any further analysis.

V. Analysis of Data

The data for this study numerically represents subjects' perceptions and use of the 15 WT content elements over the eight-week survey period. Subjects' responses on the seven-point equal appearing interval scale constitute ordinal quality data that can be analyzed using nonparametric statistical tests (Siegel, 1956). To perform the necessary tests, the actual ratings must be converted to ranks so that mean ranks can be compared for: 1) changes across time using Friedman two-way analysis of variance; 2) correlations between subjects' demographic characteristics and their ratings of elements using Spearman rho tests; and 3) differences between demographic subgroups'

ratings of elements using Mann-Whitney U tests. Results are considered significant at the $p<.05$ level. They are presented in Chapter Three and discussed in Chapter Four.

The sample population is too small to use in an analysis of whether the 15 content elements and the seven research questions actually represent 22 discrete factors. With a sufficient number of subjects, that analysis could have been done and might have led to the statistical comparison of subjects' ratings for different questions and their experience with different elements. As it is, the discussion in Chapter Four will assume that elements and questions are discrete and present tentative conclusions based on this assumption but without statistical support.

Several steps were taken in this analysis after the pooling exceptions were excluded from the data. Using the remaining 252 dependent variables, the first step was to calculate the mean and variance for each one. This led to the ranking of dependent variable means for non-repeated measures and grand means (means of repeated-measure means) for repeated ones. These rankings are summed in Chapter Four and interpreted as a grand ranking of all content elements on all questions. The apparent shifts in rank for individual content elements across the seven research questions is also discussed. However, both the grand ranking and the between-question comparisons of ranks are tentative and dependent on whether content elements and questions are discrete, a fact that would permit statistical testing for differences between the means on which these tentative conclusions

are based. As it is, the discussion is based on assumption and in need of support from further research.

The second step was to test for changes across time in the four series of repeated-measures for each content element. Friedman two-way tests were used to compare the means for repeated-measure questions to determine whether any significant increases occured. When the results of this first level of Friedman two-way tests were positive the same tests were used again but this time to examine possible changes across time in certain subgroups' rating series. How these subgroups were identified is explained under step three. For now, any change discovered at this second level might account for the first level change by virtue of some demographic characteristic. If so, then the result could be explained in part or totally by the characteristic rather than the workshop. If not, then the change could be attributed to the workshop alone.

The third step was to test for significant differences between demographic subgroups' ratings of content elements to help explain the magnitude of the means generated from all subjects' ratings and their significant changes across time for repeated-measure variables. First, subjects' demographic information was analyzed by frequency of responses, then each demographic feature was arbitrarily divided into two extremes. This was done for both the ranked and scalar responses so that just two subgroups were identified on each demographic variable. With this data, Spearman rho correlational tests could be run to identify the statistical associations of demographic factors with the dependent variables, ie., subjects' ratings of each content

element, for each question, at each measurement. Through this process 19 of the original 31 demographic characteristics were associated with all 15 elements. When a correlation was found, a Mann-Whitney U test was used to compare the two groups of ratings from the subgroups created by the demographic variable of interest. If a significant difference between subgroups' ratings was found, then the demographic characteristic might partially or even completely account for it. In either case, the effects of the workshop alone could not fully explain the magnitude of that particular mean and a full interpretation of results required discussion of this fact.

Evidence of statistical associations of demographic and dependent variables was used two different ways in the discussion. If the dependent variable was a non-repeated measure, then the apparent demographic influence on the mean was interpreted. If the dependent variable was one in a series of repeated measures, then the same demographic variable needed to correlate significantly at least twice in the same time-series before the association was considered important. When one did, the two time-series from the subgroups created by the particular demographic factor could be tested by a Friedman two-way test as described in step-one. This second level analysis of the change across time in the means from each subgroup could be used to interpret the influence of the demographic variable on the change across time in dependent variable means.

This chapter has described the methods used in this study. The survey was developed based on a preliminary study of WT workshop

participants, as well as the expertise of an author of the program, graduate students of interpersonal communication, and professors of human relations and communication. Fifteen content elements were identified and included in the 12-questionnaire survey along with seven research questions, and subjects were asked to rate each element with respect to each question. Four of the questions were asked repeatedly, another three questions were asked only once. Out of a pool of 37 workshop participants, only 17 completed all the questionnaires and constituted the research sample. The data they produced was analyzed for central tendency, frequency of response, and by nonparametric comparisons between groups and across time. The results and discussion follow in Chapters Three and Four.

Chapter Three

Results

This chapter reports the findings for each of the seven research questions, which are:

1. How well did workshop participants think they understood each content element at four intervals following its presentation?

2. Was the basic idea of each content element new to participants?

3. How well could participants use each content element, first, based upon their ability before the workshop, and secondly, based upon their anticipated ability just after the presentation of the idea but before applying it outside the workshop?

4. How much did participants plan to make use of each content element after its presentation?

5. How much use did participants report having made of each content element at three intervals following its presentation?

6. How effectively did participants think they had used each content element at three intervals following its presentation?

7. How much did participants observe others with whom they work using each content element at three intervals following its presentation?

The answers to these questions emerged from the data as analyzed according to the plan described in the last section of chapter two. These results are reported question by question, and the types of results differ depending upon whether the variable is measured repeatedly or just once.

When repeated measures are analyzed, as in research questions one, five, six, and seven, first the means, grand means, and ranks are given, then any significant changes across time are reported followed by other demographic influences on ratings of content elements.

The changes across time are determined in two rounds of Friedman two-way analyses of variance. The first round of Friedman tests has been performed on the series of means for each of the 15 content elements for each of these four research questions. When a significant change is found in one of these series of ratings, a second round of Friedman tests are made to determine changes across time within demographic subgroups' series of ratings. This is done only for demographic subgroup pairs that are significantly correlated with the content elements identified in round one. And then, it is only done where the ratings of any one subgroup differ significantly from the ratings of its pair subgroup at least twice within the series establishing a coincidence of difference for the relevant content element.

Any coincidence of difference associated with demographic characteristics that significantly correlate with content elements has been identified by Mann-Whitney U tests. Those that are not associated with significant results from the Friedman two-way tests, are stated as clearly as possible in the following presentation to illustrate how one subgroup rated the relevant content element in comparison to how its counterpart subgroup did. Also, the corresponding significant mean rank differences are charted in graphs.

Results for each of these four repeatedly measured research questions have the question itself as a text heading and are presented in three subparts headed as follows:

A. Means and Ranking.

B. Changes Across Time.

C. Other Demographic Influences.

When non-repeated measures are analyzed, as in research questions two, three, and four, first the means and ranks are given, then the correlations of demographic characteristics with ratings of content elements are indicated by significant Mann-Whitney U scores. These correlations are both stated as clearly as possible in the text and charted in graphs.

Results for each of these three questions have the research question itself as a text heading and are presented in two subparts headed as follows:

A. Means and Ranking.

B. Demographic Influences.

Before beginning to report the results related to the research questions, the unexplained data-pooling exceptions must be acknowledged. Three such exceptions exist and they are: 1) "documenting interpretations," as rated under question one; 2) "contracting to work through an issue," under question six; and 3) "mixing messages," under question seven. These three have emerged from the pooling procedure outlined in section three of chapter two. (Appendix C reports all pooling exceptions including those which have

been attributed to demographic characteristics.) Each of them stands isolated within a series of three or four repeated measures (subjects responded four times to question one and three times to questions five, six, and seven). When taken together, these unexplained exceptions seem to form no pattern. Nevertheless, each corresponding mean has to be eliminated from further analysis.

Of further note before reporting the results, it is important to explain how the questionnaire rating scale will be used in this presentation. As shown in Appendix B, questionnaires allow subjects to rate each content element from one to seven for each research question. This scale is represented as follows:

```
 ---  ---  ---  ---  ---  ---  ---
  1    2    3    4    5    6    7
 /              /              /
(not at all)  (to some extent)  (to a great extent)
```

A range of means for each question, or of grand means when measures are repeated, will be displayed on a scale like this to help visualize the results. In addition, all mean ratings will be graphically presented through the course of the text.

Question One: How well did participants think they understood each content element?

A. Means and Ranking

Subjects' ratings for thier understanding of the 15 content

Fig. 3.1. Means (m), Standard Deviations (sd), and Rank (r) for Subjects' Ratings of Their Understanding of the 15 WORKING TOGETHER Content Elements at Four Time Intervals (t= 1-4).

content element	t-1 m(sd)	t-2 m(sd)	t-3 m(sd)	t-4 m(sd)	grand mean	r
speaking for self	5.88(.93)	6.29(.69)	6.53(.62)	6.41(.51)	6.28	6
using your awareness wheel	5.47(.87)	5.71(1.05)	5.82(.95)	5.88(.93)	5.72	13
documenting interpretations	--	--*	5.65(1.06)	5.94(.90)	5.88(1.05)	5.82	12
observing and listening	6.50(.52)	6.41(.51)	6.59(.62)	6.59(.62)	6.52	2
acknowledging	6.56(.51)	6.59(.62)	6.59(.62)	6.53(.63)	6.57	1
inviting	6.38(.62)	6.12(.99)	6.53(.72)	6.47(.62)	6.36	3
checking out	6.19(.54)	6.29(.59)	6.35(.70)	6.47(.72)	6.32	5
shared meaning process	6.06(.77)	6.06(.66)	6.24(.97)	6.06(.90)	6.11	7
styles of communication	5.59(.62)	6.25(.86)	6.18(.81)	6.12(.86)	6.05	8
flexibility in using styles	5.65(.70)	6.19(.66)	6.06(.97)	5.88(.99)	5.95	9
mixing messages	5.47(.80)	5.63(1.09)	5.71(1.21)	5.47(1.38)	5.57	15
mapping an issue	6.00(.63)	5.77(.90)	5.94(.83)	5.94(.90)	5.91	10
contracting to work through an issue	5.50(.73)	6.00(.71)	6.00(.79)	5.90(.83)	5.85	11
trouble shooting	5.47(.94)	5.77(.90)	5.77(.90)	5.65(1.12)	5.66	14
building self and other esteem	6.41(.51)	6.29(.77)	6.29(.77)	6.35(.61)	6.34	4

*The data could not be pooled for this mean rating.

elements vary similarly at each of the four rating times.* Figure 3.1 shows that the grand means of these ratings range from 5.57 for "mixing messages" to 6.57 for "acknowledging." Using this range, the left and right extremes are each roughly indicated below by an "X".

```
 ---  ---  ---  ---  -X-  -X-  ---
  1    2    3    4    5    6    7
not at all    to some extent    to a great extent
```

B. Changes Across Time

Subjects' ratings of their understanding of one WT content element increased significantly as time passed. The first round of Friedman two-way tests showed that "styles of communication" received a significantly higher mean at time two (m=6.29) than at time one (m=5.59) (see Fig. 3.2). This increase was maintained through times three (m=6.18) and four (m=6.12). This finding indicated that after a few days practice with this element, learners understood it better than just after its introduction in the workshop; also, they retained this level of understanding for at least six weeks.

------(Footnote)

*Time one refers to ratings given immediately following the introductory session for the content element, i.e., before subjects had a chance to use the skill. (Please note that each of the five workshop sessions introduced only a few of the fifteen elements.) Time two ratings were given just a few days after subjects had a chance to start using the skill. Time three refers to ratings given just a few days after the entire workshop was completed. (These ratings served as both the time two and three rating for elements introduced in the fifth session, i.e., "trouble shooting" and "building self and other esteem.") Time four refers to ratings given at four to six weeks following the end of the workshop.

Fig. 3.2. Change Across Time (t) in Subjects' Understanding of the "Styles of Communication" as Indicated by Mean Ranks and Chi-Square Significance (p) of Friedman Two-Way Tests.

content element	n	mean ranks t=1	t=2	t=3	t=4	chi-sq. df=3	p
styles of communication	16*	1.72	2.78	2.81	2.69	7.894	.048

*One subject did not give a complete series of four ratings for understanding the "styles of communication.

The second round of Friedman two-way tests was performed on the two series of mean ranks representing the ratings of the demographic subgroup pair that distinguishes subjects who prefer more planning in doing their work versus those who prefer more spontaneity. The results revealed no significant change across time within either series given by this pair whose ratings significantly differed twice in four repeated measures for understanding the "styles of communication" (see Fig. 3.3). Since no significant change exists here, the change found for the full subject group represents an increase in understanding unrelated to any demographic characteristic.

C. Other Demographic Influences

Among the demographic characteristics correlating significantly with subjects' ratings for understanding the WT content elements, seven incidents were found where significant differences occured at least twice in the subjects' series of four measures and between ratings

given by a pair of demographic subgroups. These incidents involve four demographic factors and five content elements. Figure 3.3 shows the incidents and the corresponding 14 significant differences found by the 1140 Mann-Whitney U tests that were performed (19 demographic subgroup pairs rating 15 content elements at four times). A statement of each result follows below with references to the relevant demographic characteristics (D.C.).

1. Subjects who are dissatisfied with their human relations effectiveness at work reported a greater understanding of "observing and listening" than did those who are very satisfied with their effectiveness (D.C. "R"). This difference appeared first at time three and remained through time four.

2. Subjects who enjoy dealing with people more than other aspects of their work reported a greater understanding of "acknowledging" than did those who enjoy people at work less (D.C."P"). This difference existed at times one and two; after that, it disappeared.

3. Subjects who work with 15 or fewer peer level coworkers reported a greater understanding of "checking out" than by those who work with more than 15 peers (D.C. "D"). This difference existed at times one and two; after that, it disappeared. A greater understanding of "checking out" was also reported by subjects who are more laissez faire with subordinates versus those who are more directive with theirs (D.C. "K"). This difference existed at times one and three, but did not appear at either time two or four.

Fig. 3.3. The Seven Subgroup Differences by Demographic Characteristic (DC) across the Repeated Measures (t= 1-4) for Subjects' Ratings of Their Understanding of the 15 WORKING TOGETHER Content Elements as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr). (Limited to those that occur at least twice per subgroup pair in a time series.)

content element	DC*	t	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
observing and listening	R	3	12.00 (6)	7.36 (11)	15.0	.0313
		4	12.00 (6)	7.36 (11)	15.0	.0313
acknowledging	P	1	9.54 (13)	4.00 (3)	6.0	.0349
		2	10.07 (14)	4.00 (3)	6.0	.0245
checking out	D	1	10.33 (9)	6.14 (7)	15.0	.0318
		2	11.83 (9)	5.81 (8)	10.5	.0047
	K	1	5.50 (6)	9.00 (8)	12.0	.0483
		3	5.25 (6)	9.83 (8)	10.5	.0334
styles of communication	S	1	8.25 (14)	12.50 (3)		***
		2	8.54 (13)	8.33 (3)		***
		3	7.93 (14)	14.00 (3)	6.0	.0435
		4	7.28 (14)	14.50 (3)	4.5	.0244
mixing messages	L	1	6.80 (10)	12.14 (7)	13.0	.0201
		2	5.67 (9)	12.14 (7)	6.0	.0044
building self and other esteem	P	2	10.18 (14)	3.50 (3)	4.5	.0241
		3	10.18 (14)	3.50 (3)	4.5	.0241

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.
***When all four mean ranks are shown in a chart cell, a Friedman two-way test has been performed to test for change across time within a subgroup series of means.

4. Subjects who prefer more spontaneity in doing their work reported a greater understanding of "styles of communication" than did those who

prefer more planning in their work (D.C. "S"). This difference appeared first at time three and remained through time four.

5. Subjects who receive more unstructured work assignments from their supervisors reported a greater understanding of "mixing messages" than did those who get highly structured assignments from supervisors (D.C. "L"). This difference existed at times one and two; after that, it dissapeared.

6. Subjects who enjoy dealing with people more than other aspects of their work reported a greater understanding of "building self and other esteem" than did those who enjoy people less (D.C. "P"). This difference appeared at times two and three, did not exist at time one, and dissapeared at time four.

Question Two: Was the basic idea of each content element new to participants?

A. Mean and Ranking

Subjects' mean ratings for "newness" of the WT content elements range from 2.44 for "acknowledging" to 4.71 for "trouble shooting" (see Fig. 3.4). Using this range, the two extremes are each roughly indicated below by an "X."

```
---  -X-  ---  -X-  ---  ---  ---
 1    2    3    4    5    6    7
not at all    to some extent    to a great extent
```

Fig. 3.4. Means (m), Standard Deviations (sd), and Rank (r) for Subjects' Ratings of How New the 15 WORKING TOGETHER Content Elements Were to Them.

content element	m	(sd)	r*
speaking for self	3.18	(1.59)	5
using your awareness wheel	4.18	(2.04)	9
documenting interpretations	4.18	(1.81)	10
observing and listening	2.69	(1.92)	2
acknowledging	2.44	(1.86)	1
inviting	2.94	(1.84)	4
checking out	2.88	(1.71)	3
shared meaning process	3.44	(1.75)	7
styles of communication	4.47	(1.23)	14
flexibility in using styles	4.41	(1.18)	12
mixing messages	4.47	(1.51)	13
mapping an issue	4.00	(1.59)	8
contracting to work through an issue	4.31	(1.58)	11
trouble shooting	4.71	(1.61)	15
building self and other esteem	3.29	(1.86)	6

*This ranking of "newness" begins with the smallest mean reversing the order used to rank means under the other research questions.

B. Demographic Influences

Figure 3.5 shows the 18 significant differences found by the 285 Mann-Whitney U tests that were performed (19 demographic subgroup pairs rating 15 content elements). These differences involve the 13

Fig. 3.5. The 18 Subgroup Differences by Demographic Characteristic (DC) for Subjects' Ratings of How New 11 of the 15 WORKING TOGETHER Content Elements Were to Them as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr).

content element	DC*	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
speaking for self	I	6.17 (9)	12.19 (8)	10.5	.0102
using your awareness wheel	E	13.00 (5)	7.33 (12)	10.0	.0327
documenting interpretations	N	5.20 (5)	10.58 (12)	11.0	.0396
	R	12.42 (6)	7.14 (11)	12.5	.0343
observing and listening	M	8.73 (11)	3.00 (3)	3.0	.0308
	Q	7.42 (13)	13.70 (3)	5.5	.0486
inviting	M	8.86 (11)	2.50 (3)	1.5	.0157
	Q	7.15 (13)	14.33 (3)	2.0	.0152
	S	7.38 (13)	13.53 (3)	5.0	.0442
checking out	C	10.45 (10)	5.25 (6)	10.5	.0299
	Q	7.38 (13)	13.33 (3)	5.0	.0452
shared meaning process	G	11.31 (8)	5.69 (8)	9.5	.0162
flexibility in using styles	E	12.80 (5)	7.42 (12)	11.0	.0348
	I	6.83 (9)	11.44 (8)	16.5	.0480
mixing messages	O	13.75 (4)	7.54 (13)	7.0	.0269
mapping an issue	A	7.00 (12)	13.00 (4)	6.0	.0239
	K	11.40 (5)	5.33 (9)	3.0	.0070
trouble shooting	D	6.78 (9)	11.50 (8)	16.0	.0471

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.

demographic characteristics that correlated significantly with subjects' ratings for "newness" of WT content elements. A statement of each result follows below with references to the relevant demographic characteristics (D.C.).

1. Both "speaking for self" and "flexibility in using styles" were newer ideas to subjects who spend 10% or less of their work time with people not in their work unit than to those who spend more than 10% with this group (D.C. "I").

2. Both "using your awareness wheel" and "flexibility in using styles" were newer ideas to subjects who spend more of their work time with others than to those who spend more work time alone (D.C. "E").

3. "Documenting interpretations" was a newer idea to two subject subgroups: a) those who talk through problems at work with difficult versus those who find it easy to do (D.C. "N"), and b) those who are very satisfied with their human relations effectiveness at work versus those who are dissatisfied with their effectiveness (D.C. "R").

4. "Observing and listening" and "inviting" were both newer ideas to subjects who give subordinates more unstructured work assignments than to those who give them more highly structured ones (D.C. "M").

5. "Inviting" alone was a newer idea to subjects who prefer more planning in doing their work than to those who prefer more spontaneity (D.C. "S").

6. "Observing and listening," "inviting," and "checking out" were all newer ideas to subjects who come into contact with more familiar people at work than to those who usually contact more new acquaintences (D.C. "Q").

7. "Checking out" alone was a newer idea to subjects who have two or more supervisors than to those who have only one (D.C. "C").

8. The "shared meaning process" was a newer idea to subjects who spend more than 10% of their work time with their superiors than to subjects who spend 10% or less work time with theirs (D.C. "G").

9. "Mixing messages" was a newer idea to subjects who almost always feel free to speak their mind at work than to those who rarely feel this way (D.C. "O").

10. "Mapping an issue" was a newer idea to two subject subgroups a) those who have been in their present job 10 years or less versus those who have been there more than 10 years (D.C. "A") and b) those who are more laissez faire with subordinates versus those who are more directive (D.C. "K").

11. "Trouble shooting" was a newer idea to subjects who work with 15 or fewer peer level coworkers than to those who work with more than 15 peers (D.C. "D").

Question Three: How well could participants use each content element, first, based upon their ability before the workshop, and secondly, based upon their anticipated ability just after the presentation of the idea but before applying it outside of the workshop?

Since this question has been treated in two parts in the data analysis, results for each part are reported seperately as: I. Ability Prior to the Workshop and II. Anticipation of Ability following the Introductory Session.

I. Ability Prior to the Workshop

A. Means and Ranking

Subjects mean ratings evaluating their ability to use any of the WT content elements prior to the workshop range from 3.13 for "contracting to work through an issue" to 5.63 for "acknowledging" (see Fig. 3.6). Using this range, the two extremes are each roughly indicated below by an "X."

```
   ---  ---  -X-  ---  -X-  ---  ---
    1    2    3    4    5    6    7
not at all    to some extent    to a great extent
```

B. Demographic Influences

Figure 3.7 shows the 11 significant differences found by the 285 Mann-Whitney U tests that were performed (19 demographic subgroup pairs rating 15 content elements). These differences involve the nine

Fig. 3.6. Means (m), Standard Deviations (sd), and Rank (r) for Subjects' Ratings of Their Pre-Workshop Ability to Use the 15 WORKING TOGETHER Content Elements.

content element	m	(sd)	r
speaking for self	4.77	(1.25)	4
using your awareness wheel	3.24	(1.72)	14
documenting interpretations	3.65	(1.66)	9
observing and listening	4.88	(1.03)	3
acknowledging	5.63	(1.03)	1
inviting	4.88	(1.36)	2
checking out	4.75	(1.13)	6
shared meaning process	4.13	(1.46)	7
styles of communication	3.35	(1.06)	12
flexibility in using styles	3.82	(1.19)	8
mixing messages	3.53	(1.38)	11
mapping an issue	3.31	(1.66)	13
contracting to work through an issue	3.13	(1.36)	15
trouble shooting	3.53	(1.55)	10
building self and other esteem	4.77	(.90)	5

demographic characteristics that correlated significantly with subjects' ratings of their preworkshop ability to use the WT content elements. A statement of each result follows below with references to the relevant demographic characteristic (D.C.).

Fig. 3.7. The 11 Subgroup Differences by Demographic Characteristic (DC) for Subjects' Ratings of Their Preworkshop Ability to Use Seven of the 15 WORKING TOGETHER Content Elements as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr).

content element	DC*	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
using your awareness wheel	B	7.54 (13)	13.75 (4)	7.0	.0281
documenting interpretations	A	6.75 (12)	14.40 (5)	3.0	.0030
	P	7.93 (14)	14.00 (3)	6.0	.0488
inviting	R	5.58 (6)	10.25 (10)	12.5	.0500
flexibility in using styles	N	4.70 (5)	10.79 (12)	8.5	.0187
mapping an issue	J	11.57 (7)	6.11 (9)	10.0	.0203
trouble shooting	G	11.69 (8)	6.61 (9)	14.5	.0346
building self and other esteem	F	6.87 (9)	11.50 (8)	16.0	.0360
	G	11.50 (8)	6.78 (9)	16.0	.0360
	H	11.20 (10)	5.86 (7)	13.0	.0193
	P	7.93 (14)	14.00 (3)	6.0	.0394

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.

1. When evaluating their preworkshop skill at "using your awareness wheel," subjects who are the main supervisor for more than 10 employees rated their ability higher than did those who supervise 10 or fewer (D.C. "B").

2. When evaluating their preworkshop skill at "documenting interpretations," the subjects who rated their ability higher included both a) those who have been in their present job more than 10 years versus those who have been there 10 years or less (D.C. "A") and b.) those who enjoy dealing with people less than other aspects of their work versus those who enjoy people at work more (D.C. "P").

3. When evaluating their preworkshop skill at "inviting," subjects who are very satisfied with their human relations effectiveness at work rated their ability higher than did those who are dissatisfied with their effectiveness (D.C. "R").

4. When evaluating their preworkshop skill at "flexibility in using styles," subjects who can easily talk through problems at work rated their ability higher than did those who find it difficult to do (D.C. "N").

5. When evaluating their preworkshop skill at "mapping an issue," subjects who are more self directed in their work rated their ability higher than did those who are more directed by someone else (D.C. "J").

6. When evaluating their preworkshop skill at either "trouble shooting" or "building self and other esteem," subjects who spend 10% or less of their work time with superiors rated their ability higher than did those who spend more than 10% with superiors (D.C. "G").

7. When evaluating their preworkshop skill at "building self and other esteem," three subject subgroups rated their ability higher including: a) those who spend more than 10% of their work time with subordinates versus those who spend 10% or less with this group (D.C. "F"); b) those who spend 25% or less of their work time with peer level coworkers versus those who spend more than 25% with peers (D.C. "H"); and c) those who enjoy dealing with people less than other aspects of their work versus those who enjoy people at work more (D.C. "P").

II. Anticipation of Ability Following the Introductory Session

A. Means and Ranking

When anticipating their ability to use any of the WT content elements just following the introductory session, subjects mean ratings range from 4.06 for "mixing messages" to 6.19 for "acknowledging" (see Fig. 3.8) Using this range, the two extremes are each roughly indicated below by an "X."

```
--- --- --- -X- --- -X- ---
 1   2   3   4   5   6   7
not at all   to some extent   to a great extent
```

B. Demographic Influences

Figure 3.9 shows the 11 significant differences found by the 285 Mann-Whitney U tests that were performed (19 demographic subgroup pairs rating 15 content elements). These differences invlove the six

Fig. 3.8. Means (m), Standard Deviations (sd), and Rank (r) for Subject's Ratings of Their Ability to Use the 15 WORKING TOGETHER Content Elements as Anticipated at the End of the Introductory Session.

content element	m	(sd)	r
speaking for self	5.06	(.97)	6
using your awarenes wheel	4.77	(.97)	9
documenting interpretations	4.65	(1.06)	11
observing and listening	5.50	(.63)	4
acknowledging	6.19	(.54)	1
inviting	5.69	(.79)	2
checking out	5.50	(.82)	3
shared meaning process	4.94	(1.00)	7
styles of communication	4.59	(1.00)	12
flexibility in using styles	4.71	(1.21)	10
mixing messages	4.06	(1.09)	14
mapping an issue	4.50	(1.16)	13
contracting to work through an issue	4.06	(1.06)	15
trouble shooting	4.82	(.95)	8
building self and other esteem	5.35	(.79)	5

demographic characteristics that correlated significantly with subjects' ratings of their ability to use the 15 WT content elements just following the introductory session. (These ratings were made before subjects has a chance to use any content element outside the workshop.) A statement of each result follows below with references to each relevant demographic characteristic (D.C.).

Fig. 3.9. The 11 Subgroup Differences by Demographic Characteristic (DC) for Subjects' Ratings of Their Anticipated Ability Just following the Introductory Session to Use 10 of the 15 WORKING TOGETHER Content Elements as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr).

content element	DC*	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
documenting interpretations	A	6.83 (12)	14.20 (5)	4.0	.0041
observing and listening	S	9.69 (13)	3.33 (3)	4.0	.0176
inviting	G	10.94 (8)	6.06 (8)	12.5	.0259
	R	5.67 (6)	10.20 (10)	13.0	.0449
checking out	Q	9.58 (13)	3.83 (3)	5.5	.0405
shared meaning process	S	9.58 (13)	2.67 (3)	2.0	.0129
styles of communication	N	5.20 (5)	10.58 (12)	11.0	.0357
flexibility in using styles	N	4.70 (5)	10.79 (12)	8.5	.0186
mapping an issue	S	9.36 (14)	2.50 (2)	2.0	.0495
contracting to work through an issue	S	9.39 (14)	2.25 (2)	1.5	.0324
building self and other esteem	A	7.42 (12)	12.80 (5)	11.0	.0301

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.

1. When evaluating their skill with "documenting interpretations" and "building self and other esteem" just following the introductory

session, subjects who have been in their present job more than 10 years rated their ability higher than did those who have been there 10 years or less (D.C. "A").

2. When evaluating their skill with the four elements, "observing and listening," the "shared meaning process," "mapping an issue," and "contracting to work through an issue," just following the introductory session, subjects who prefer more planning in doing their work rated their ability higher than did those who prefer more spontaneity (D.C. "S").

3. When evaluating their skill with "inviting" just following the introductory session, two subject subgroups who rated their ability higher including: a) those who spend 10% or less of their work time with their superiors versus those who spend more than 10% with theirs (D.C. "G") and b) those who are very satisfied with their human relations effectiveness at work versus those who are dissatisfied with their effectiveness (D.C. "R").

4. When evaluating their skill with "checking out" just following the introductory session, subjects who come into contact with more familiar people at work rated their ability higher than did those who usually contact more new acquaintences there (D.C. "Q").

5. When evaluating their skill with the "styles of communication" and "flexibility in using styles" just following the introductory session, subjects who can easily talk through problems at work rated their

ability higher than did those who find it difficult to do (D.C. N").

Question Four: How much did participants plan to make use of each content element after its presentation?

A. Means and Ranking

When anticipating how much they would use any of the WT content elements just following the introductory session, subjects' mean ratings range from 4.44 for "contracting to work through an issue" to 6.13 for "acknowledging" (see Fig. 3.10). Using this range, the two extremes are each roughly indicated below by an "X."

```
--- --- --- -X- --- -X- ---
 1   2   3   4   5   6   7
not at all   to some extent   to a great extent
```

B. Demographic Influences

Figure 3.11 shows the 16 significant differences found by the 285 Mann-Whitney U tests that were performed (19 demographic subgroup pairs rating 15 content elements). These differences involve the 12 demographic characteristics that significantly correlated to subjects' ratings of their anticipated use of the WT content elements. (These ratings were made at the end of the session in which the relevant element was introduced but before subjects had any opportunity to use them outside the workshop.) A statement of each result follows below with references to the relevant demographic characteristic (D.C.).

Fig. 3.10. Means (m), Standard Deviations (sd), and Rank (r) for Subjects' Ratings of How Much They Anticipate Using the 15 WORKING TOGETHER Content Elements.

content element	m	(sd)	r
speaking for self	5.18	(.95)	9
using your awareness wheel	5.12	(.78)	10
documenting interpretations	5.18	(1.13)	9
observing and listening	5.88	(1.03)	2
acknowledging	6.13	(.81)	1
inviting	5.56	(.89)	5
checking out	5.63	(.89)	4
shared meaning process	5.00	(.73)	11
styles of communication	5.24	(1.09)	6.5
flexibility in using styles	5.24	(1.09)	6.5
mixing messages	4.65	(1.06)	13
mapping an issue	4.56	(1.09)	14
contracting to work through an issue	4.44	(1.09)	15
trouble shooting	4.88	(1.22)	12
building self and other esteem	5.77	(.75)	3

1. Subjects who spend 10% or less of their work time with people not in their work unit anticipated greater use of the three skills, "speaking for self," "mapping an issue," and "contracting to work through an issue," just following the introductory session, than did those who spend more than 10% of their time with this group (D.C. "I").

Fig. 3.11. The 16 Subgroup Differences by Demographic Characteristic (DC) for Subjects' Ratings of Their Anticipated Use of 11 of the 15 WORKING TOGETHER Content Elements as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr).

content element	DC*	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
speaking for self	I	11.49 (9)	6.25 (8)	14.0	.0233
using your awareness wheel	S	10.04 (14)	4.17 (3)	6.5	.0396
documenting interpretations	G	13.50 (4)	7.62 (13)	8.0	.0353
observing and listening	K	4.67 (6)	9.63 (8)	7.0	.0209
	M	6.41 (11)	11.50 (3)	4.5	.0493
inviting	D	11.33 (9)	4.86 (7)	6.0	.0041
flexibility in using styles	L	6.90 (10)	12.00 (7)	14.0	.0260
	N	4.50 (5)	10.88 (12)	7.5	.0103
	O	4.00 (4)	10.54 (13)	6.0	.0143
mixing messages	D	11.72 (9)	6.50 (8)	16.0	.0457
mapping an issue	A	10.00 (12)	4.00 (4)	6.0	.0240
	I	10.88 (8)	6.13 (8)	13.0	.0391
contracting to work through an issue	A	9.38 (12)	4.50 (4)	8.0	.0448
	I	10.88 (8)	6.13 (8)	13.0	.0391
trouble shooting	C	7.18 (11)	12.33 (6)	13.0	.0320
building self and other esteem	P	7.86 (14)	14.33 (3)	5.0	.0295

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.

2. Subjects who prefer more planning in doing their work anticipated greater use of "using your awareness wheel" just following the introductory session, than did those who prefer more spontaneity in their work (D.C. "S").

3. Subjects who spend 10% or less of their work time with their superiors anticipated greater use of "documenting interpretations" just following the introductory session, than did those who spend more than 10% of their time with their superiors (D.C. "G").

4. The two subject subgroups who anticipated greater use of "observing and listening" just following the introductory session, included: a) those who are more laissez faire with subordinates versus those who are more directive with them (D.C. "K") and b) those who give subordinates more unstructured work assignments versus those who give them more highly structured ones (D.C. "M").

5. Subjects who work with 15 or fewer peer level coworkers anticipated greater use of "inviting" and "mixing messages" following the introductory session, than did those who work with more than 15 peers (D.C. "D").

6. The three subject subgroups who anticipated greater use of "flexibility in using styles" just following the introductory session included: a) those who receive more unstructured work assignments from their supervisors versus those who get more highly structured ones (D.C. "L"); b) those who can easily talk through problems at work

versus those who find it difficult to do (D.C. "N"); and c) those who almost always feel free to speak their mind at work versus those who rarely feel free to do so (D.C. "O").

7. Subjects who have been in their present job 10 years or less anticipated greater use of "mapping an issue" and "contracting to work through an issue" just following the introductory session, than did those who have been there more than 10 years (D.C. "A").

8. Subjects who have two or more supervisors anticipated greater use of "trouble shooting" just following the introductory session, than did those who have only one supervisor (D.C. "C").

9. Subjects who enjoy dealing with people less than other aspects of their work anticipated greater use of "building self and other esteem" just following the introductory session, than did those who enjoy people at work more (D.C. "P").

Question Five: How much did participants report having used each content element after its presentation?

A. Means and Ranking

Subjects' ratings of their amount of use of the 15 WT content elements vary similarly at each of the three rating times.* Figure

------(Footnote)
*Time one refers to the ratings given just a few days (cont. p. 66)

Fig. 3.12. Means (m), Standard Deviations (sd), and Rank (r) for Subjects' Ratings of Their Use of the 15 WORKING TOGETHER Content Elements at Three Time Intervals (t= 1-3).

content element	t-1 m(sd)	t-2 m(sd)	t-3 m(sd)	grand mean	r
speaking for self	4.82(2.28)	5.53(1.01)	5.88(.78)	5.41	5
using your awareness wheel	4.65(1.12)	4.65(1.12)	4.71(1.36)	4.67	10
documenting interpretations	4.47(1.42)	5.29(1.31)	4.94(1.35)	4.90	8
observing and listening	5.53(1.07)	6.24(.56)	6.00(.71)	5.92	2
acknowledging	5.65(.93)	6.29(1.05)	6.06(.90)	6.00	1
inviting	5.00(.94)	5.65(.86)	5.65(.79)	5.43	4
checking out	4.41(1.28)	5.41(1.23)	5.47(.94)	5.10	7
shared meaning process	2.77(1.25)	4.18(1.67)	3.82(1.63)	3.59	15
styles of communication	4.63(1.41)	5.59(.62)	5.29(1.31)	5.17	6
flexibility in using styles	4.88(1.41)	5.29(.99)	4.53(1.63)	4.90	9
mixing messages	3.63(1.41)	4.18(1.59)	4.18(1.51)	4.00	13
mapping an issue	3.53(1.55)	4.41(1.70)	4.29(2.05)	4.08	11
contracting to work through an issue	3.65(1.41)	3.88(1.80)	4.29(1.96)	3.94	14
trouble shooting	4.18(1.88)	4.18(1.88)	3.82(1.88)	4.06	12
building self & other esteem	5.59(.94)	5.59(.94)	5.29(.92)	5.49	3

------(Footnote)
after subjects had a chance to start using the skill. Time two ratings were given a few days after the entire workshop was completed. (These ratings served as both the time one and two rating for elements introduced in the fifth session, including "trouble shooting" and "building self and other esteem.") Time three ratings were given at four to six weeks following the end of the entire workshop.

3.12 shows that the grand means of these ratings range from 3.59 for the "shared meaning process" to 6.00 for "acknowledging." Using this range, the left and right extremes are each roughly indicated below by an "X."

```
--- --- -X- --- --- -X- ---
 1   2   3   4   5   6   7
not at all   to some extent   to a great extent
```

B. Changes Across Time

Subjects' ratings of their amount of use of two WT content elements increased significantly as time passed. The first round of Friedman two-way tests show that "inviting" received a significantly higher mean rating at times two (m=5.65) and three (m=5.65) than at time one (m=5.00) (see Fig. 3.13). Also, "checking out" received a higher mean rating both at times two (m=5.41) and three (m=5.47) than at time one (m=4.41). These findings indicate that subjects reported less use of either "inviting" or "checking out" during the first few days following the presentation of the idea than they did at either a few days after the workshop's end or even six weeks later.

The second round of Friedman two-way tests was performed on the two series of mean ranks belonging to the demographic subgroup pair that distinguishes subjects who spend 25% or less of their work time with peers versus those who spend more than 25% with peers (see Fig. 3.14). The results reveal that the significant change across time found in round one for "checking out" may be attributable to one of

these subgroups. A significant change across time occurs in ratings given by the subgroup that spends 25% or less of their work time with peers (see Fig. 3.13). Even though the patterns of change appear different, the significant increase occurs between times one and two for both the full group and the subgroup, suggesting that the change within this subgroup accounts for at least some (perhaps all) of the change in the whole subject group.

Fig. 3.13. Change Across Time (t) in Subjects' Reported Use of "Inviting" and "Checking Out" as Indicated by Mean Ranks and Chi-Square Significance (p) of Friedman Two-Way Tests.

content element	n	mean ranks t=1	t=2	t=3	chi-sq. df=2	p
inviting	17	1.47	2.26	2.26	7.147	.028
checking out	17	1.50	2.32	2.18	6.559	.038
checking out	10*	1.35	2.10	2.55	7.350	.025

*This subgroup only includes subjects who spend 25% or less of their work time working with peers.

C. Other Demographic Influences

Among the demographic characteristics correlating significantly with subjects' ratings for their amount of use of the WT content elements, five incidents were found where significant differences occur at least twice in the series of three measures and between ratings given by a pair of demographic subgroups. These incidents involve four

Fig. 3.14. The 10 Subgroup Differences by Demographic Characteristic (DC) across the Repeated Measures (t= 1-3) for Subjects' Ratings of Their Use of the WORKING TOGETHER Content Elements as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr). (Limited to those that occur at least twice per subgroup pair in a time series.)

content element	DC*	t	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
checking out	H	1	7.05 (10)	11.79 (7)	15.5	.0486
		2	7.00 (10)	11.86 (7)	15.0	.0426
		3	10.10 (10)	7.43 (7)		***
styles of communication	A	1	10.04 (12)	3.88 (5)	5.5	.0215
		2	7.17 (12)	13.40 (5)	8.0	.0093
mapping an issue	N	1	13.10 (5)	7.29 (12)	9.5	.0237
		3	13.90 (5)	6.96 (12)	5.5	.0087
contracting to work through an issue	N	1	13.10 (5)	7.29 (12)	9.5	.0237
		3	13.40 (5)	7.17 (12)	8.0	.0183
trouble shooting	O	1	14.75 (4)	7.23 (13)	3.0	.0082
		2	14.75 (4)	7.23 (13)	3.0	.0082

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.
***When all three mean ranks are shown in a chart cell, a Friedman two-way test has been performed to test for change across time within a subgroup series of means.

demographic factors and five content elements. Figure 3.14 shows the incidents and the corresponding 10 significant differences found by the 855 Mann-Whitney U tests that were performed (19 demographic subgroups pairs rating 15 content elements at three times). A statement of each result follows below with reference to the relevant demographic characteristic (D.C.).

1. More use of "checking out" was reported by subjects who spend more than 25% of their work time with peer level coworkers than was by those who spend 25% or less with peers (D.C. "H"). This occured at times one and two but not at three.

2. At time one, more use of the "styles of communication" was reported by subjects who have been in their present job 10 years or less than it was by those who have been there more than 10 years. At time two the reverse was true; subjects who have been in their present job more than 10 years reported more use of the "styles of communication" than did their counterpart subgroup (D.C. "A"). No significant difference was found at time three.

3. More use of "mapping an issue" and "contracting to work through an issue" was reported by subjects who talk through problems at work with difficulty than was by those who find it easy to do (D.C. "N"). For both elements this difference occurred at times one and three but not at time two.

4. More use of "trouble shooting" was reported by subjects who rarely feel free to speak their mind at work than was by those who almost always feel free to do so (D.C. "O"). This was true at times one and two but not at time three.

Question Six: How effectively did participants think they used each content element after its presentation?

A. Means and Ranking

Subjects' mean ratings for their effectiveness when using the 15 WT content elements varied similarly at all three rating times.* Figure 3.15 shows that the grand means of these ratings ranged from 3.74 for "mixing messages" to 5.86 for "acknowledging." Using this range, the left and right extremes are each roughly indicated below by an "X."

---	---	-X-	---	-X-	---	---
1	2	3	4	5	6	7
not at all		to some extent			to a great extent	

B. Changes Across Time

Subjects' ratings of their effectiveness when using two WT content elements increased significantly as time passed. The first round of Friedman two-way tests show that "observing and listening" received a significantly higher mean rating at times two (m=6.12) and three (m=6.00) than at time one (m=5.12) (see Fig. 3.16). Also, "checking out" received a higher mean rating both at times two (m=5.35) and three (m=5.35) than at time one (m=4.24). These findings indicate that subjects reported less effectiveness with "observing and listening" and "checking out" during the first few days following the presentation of the idea than they did at either a few days after the workshop's end or even six weeks later.

------(Footnote)
*See footnote on page 65.

Fig. 3.15. Means (m), Standard Deviations (sd), and Ranks (r) for Subjects' Ratings of Their Effectiveness When Using the 15 WORKING TOGETHER Content Elements at Three Time Intervals (t= 1-3).

content element	t=1 m(sd)	t=2 m(sd)	t=3 m(sd)	grand mean	r
speaking for self	5.06(1.25)	5.47(.94)	5.65(.61)	5.06	4
using your awareness wheel	4.41(.94)	4.53(1.28)	4.82(1.29)	4.59	10
documenting interpretations	4.65(1.17)	5.00(1.37)	4.94(1.30)	4.86	8
observing and listening	5.12(1.11)	6.12(.50)	6.00(.87)	5.75	2
acknowledging	5.59(.94)	6.12(.99)	5.88(.78)	5.86	1
inviting	5.06(.97)	5.47(.87)	5.47(.87)	5.33	3
checking out	4.34(1.30)	5.35(1.00)	5.35(.70)	5.01	6
shared meaning process	3.59(1.54)	4.47(1.59)	4.12(1.65)	4.06	12
styles of communication	4.56(1.15)	5.18(.73)	4.89(.99)	4.89	7
flexibility in using styles	4.81(1.22)	4.77(1.20)	4.47(1.23)	4.68	9
mixing messages	3.63(1.54)	3.77(1.60)	3.82(1.74)	3.74	15
mapping an issue	3.59(1.62)	4.71(1.76)	4.28(2.09)	4.19	11
contracting to work through an issue	3.82(1.38)	4.12(1.87)	-- --*	3.97	14
trouble shooting	4.12(1.87)	4.12(1.87)	3.88(2.06)	4.04	13
building self & other esteem	5.47(.80)	5.47(.80)	5.12(.93)	5.02	5

*The data could not be pooled for this mean rating.

The second round of Friedman two-way tests was performed on the two series of mean ranks belonging to the demographic subgroup pair that distinguishes subjects who spend 25% or less of their work time

with peers versus those who spend more than 25% with peers (see Fig. 3.16). The results reveal that the significant change across time found in round one for "checking out" may be attributable to one of these subgroups. A significant change across time occurs in ratings given by the subgroup that spends 25% or less of their work time with peers (see Fig. 3.17). Even though the patterns of change appear different, the significant increase occurs between times one and two for both the full group and the subgroup, suggesting that the change within this subgroup accounts for at least some (perhaps all) of the change in the whole subject group.

Fig. 3.16. Change Across Time (t) in Subjects' Reported Effectiveness When Using "Observing and Listening" and "Checking Out" as Indicated by Mean Ranks and Chi-Square Significance (p) of Friedman Two-Way Tests.

content element	n	mean ranks t=1	t=2	t=3	chi-sq. df=2	p
observing and listening	17	1.41	2.38	2.21	9.088	.011
checking out	17	1.41	2.35	2.24	8.941	.011
checking out	10*	1.35	2.10	2.55	7.350	.025

*This subgroup only includes subjects who spend 25% or less of their work time working with peers.

C. Other Demographic Influences

Among the demographic characteristics correlating significantly with subjects' ratings for their amount of use of the WT content elements, five incidents were found where significant differences occur

Fig. 3.17. The 10 Subgroup Differences by Demographic Characteristic (DC) across the Repeated Measures (t= 1-3) for Subjects' Ratings of Their Effectiveness When Using WORKING TOGETHER Content Elements as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr). (Limited to those that occur at least twice per subgroup pair in a time series.)

content element	DC*	t	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
checking out	H	1	6.55 (10)	12.50 (7)	10.5	.0125
		2	6.15 (10)	13.07 (7)	6.5	.0029
		3	8.50 (10)	9.71 (7)		***
shared meaning	K	1	11.17 (6)	5.88 (9)	8.0	.0226
		2	10.75 (6)	6.17 (9)	10.5	.0446
trouble shooting	O	1	13.50 (4)	7.62 (13)	8.0	.0353
		2	14.25 (4)	7.38 (13)	5.0	.0160
building self and other esteem	E	1	6.55 (10)	12.50 (7)	10.5	.0096
		2	6.55 (10)	12.50 (7)	10.5	.0096
	H	1	12.50 (5)	7.54 (12)	12.5	.0458
		2	12.50 (5)	7.54 (12)	12.5	.0458

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.
***When all three mean ranks are shown in a chart cell, a Friedman two-way test has been performed to test for change across time within a subgroup series of means.

at least twice in the series of three measures and between ratings given by a pair of demographic subgroups. These incidents involve four demographic factors and four content elements. Figure 3.14 shows the incidents and the corresponding 10 significant differences found by the 855 Mann-Whitney U tests that were performed (19 demographic subgroups

pairs rating 15 content elements at three times). A statement of each result follows below with reference to the relevant demographic characteristic (D.C.).

Each of the following differences occurs at times one and two but disappears at time three as indicated in Figure 3.17.

1. Subjects who spend more than 25% of their work time with peer level coworkers reported greater effectiveness in their use of "checking out" than did those who spend 25% or less of their work time with peers (D.C. "H").

2. Subjects who are more directive with their subordinates reported greater effectiveness in the use of the "shared meaning process" than did those who are more laissez faire with them (D.C. "K").

3. Subjects who rarely feel free to speak their mind at work reported greater effectiveness in the use of "trouble shooting" than did those who almost always feel free to do so (D.C. "O").

4. Two subgroups reported greater effectiveness in their use of "building self and other esteem" including: a) subjects who spend more of their work time with others versus those who spend more time alone (D.C. "E") and b) those who spend 25% or less of their work time with peer level coworkers versus those who spend more than 25% with their peers (D.C. "H").

Question Seven: How much did participants observe others with whom they work using each content element after its presentation?

A. Means and Ranking

Subjects' ratings reflecting how much they observed others using the 15 content elements vary similarly at all three rating times.* Figure 3.18 shows that the grand means of these ratings range from 2.94 for the "trouble shooting" to 5.12 for "acknowledging." Using this range, the left and right extremes are each roughly indicated below by an "X."

```
---  -X-  ---  ---  -X-  ---  ---
 1    2    3    4    5    6    7
not at all   to some extent   to a great extent
```

B. Changes Across Time

Subjects' ratings of their observations of other use of two WT content elements increased significantly as time passed. The first round of Friedman two-way tests show that "speaking for self" received a significant increase in mean rating rising equally from time one (m=3.94), to time two (m=4.59), and three (m=5.12) (see Fig. 3.18). Also, "checking out" received a higher mean rating at times two (m=4.06) and three (m=4.24) than at time one (m=3.12). These findings indicate that subjects reported observing others use "speaking for

------(Footnote)
*See footnote page 65.

Fig. 3.18. Means (m), Standard Deviations (sd), and Rank (r) for Subjects' Ratings of Their Observations of Others' Use of the 15 WORKING TOGETHER Content Elements at Three Time Intervals (t= 1-3).

content element	t=1 m(sd)	t=2 m(sd)	t=3 m(sd)	grand mean	r
speaking for self	3.94(1.52)	4.59(1.06)	5.12(1.05)	4.55	3
using your awareness wheel	3.41(1.28)	3.29(1.21)	3.94(1.30)	3.55	10
documenting interpretations	3.77(1.52)	3.77(1.30)	4.29(1.36)	3.94	9
observing and listening	4.53(1.51)	4.94(1.25)	5.47(.94)	4.98	2
acknowledging	5.06(1.30)	5.12(1.31)	5.18(1.31)	5.12	1
inviting	4.12(1.27)	4.14(1.46)	4.65(.93)	4.30	5
checking out	3.12(1.22)	4.06(1.35)	4.24(1.30)	3.47	11
shared meaning process	2.29(1.21)	3.31(1.23)	3.18(1.51)	2.93	14
styles of communication	4.44(1.15)	4.59(1.46)	4.41(1.42)	4.48	4
flexibility in using styles	4.56(1.41)	3.82(1.63)	4.06(1.52)	4.15	7
mixing messages	4.00(1.41)	-- --*	4.18(1.67)	4.09	8
mapping an issue	3.06(1.48)	3.24(1.79)	3.59(2.12)	3.30	12
contracting to work through an issue	2.88(1.36)	3.06(1.60)	3.7(1.91)	3.14	13
trouble shooting	2.82(1.59)	2.82(1.59)	3.18(2.04)	2.94	15
building self & other esteem	4.12(1.27)	4.12(1.27)	4.53(1.33)	4.28	6

*The data could not be pooled for this mean rating.

self" increasingly more after each time interval. They also indicate that subjects reported observing other use "checking out" less during

the first few days following the introduction of the skill than they did a few days after the workshop's end and six weeks later.

No second round of Friedman two-way tests were performed since the ratings of no demographic subgroup pairs met both of two conditions: a) correlating significantly with either "speaking for self" or "checking out" (the elements identified in round one) and b) producing any incidents of within-pair significant differences at least twice in the series of three ratings of observing others use these two content elements. This condition indicates that the change found for the full subject group represents an increase in observations of use unrelated to any demographic characteristic.

Fig. 3.19. Change Across Time (t) in Subjects' Reported Observation of Others' Use of "Speaking for Self" and "Checking Out" as Indicated by Mean Ranks and Chi-Square Significance (p) of Friedman Two-Way Tests.

content element	n	mean ranks t=1	t=2	t=3	chi-sq. df=2	p
speaking for self	17	1.50	2.03	2.47	8.029	.018
checking out	17	1.44	2.29	2.26	7.971	.019

C. Other Demographic Influences

Among the demographic characteristics correlating significantly with subjects' ratings for observing others use WT content elements, six incidents were found where significant differences occur at least

Fig. 3.20. The 12 Subgroup Differences by Demographic Characteristic (DC) across the Repeated Measures (t= 1-3) for Subjects' Ratings of Their Observations of Others' Use of the WORKING TOGETHER Content Elements as Indicated by Significant Mann-Whitney U Scores and Mean Ranks (mr). (Limited to those that occur at least twice per subgroup pair in a time series.)

content element	DC*	t	low subgroup mr (n)**	high subgroup mr (n)**	U	sig. level corrected for ties
using your awareness wheel	F	1	6.56 (9)	11.75 (8)	14.0	.0283
		3	6.44 (9)	11.88 (8)	13.0	.0211
acknowledging	C	1	10.07 (11)	5.75 (6)	13.5	.0430
		2	11.05 (11)	5.25 (6)	10.5	.0211
inviting	D	1	11.44 (9)	6.25 (8)	14.0	.0288
		3	11.61 (9)	6.06 (8)	12.5	.0172
contracting to work through an issue	E	1	4.20 (5)	11.00 (12)	6.0	.0072
		2	5.10 (5)	10.63 (12)	10.5	.0355
building self and other esteem	I	1	6.39 (9)	11.94 (8)	12.5	.0196
		2	6.39 (9)	11.94 (8)	12.5	.0196
	J	1	6.44 (8)	11.28 (9)	15.5	.0418
		2	6.44 (8)	11.28 (9)	15.5	.0418

*Demographic characteristics are listed here by letters which correspond to the listing in Appendix D.
**When the sum of "low" subgroup n plus "high" subgroup n does not equal 17, then either the demographic characteristic has precluded some member(s) of the sample or some dependent variable values are missing.

twice in the series of three measures and between ratings given by paired demographic subgroups. These incidents involve six demographic factors and five content elements. Figure 3.14 shows the incidents and the corresponding 12 significant differences found by the 855 Mann-Whitney U tests that were performed (19 demographic subgroups pairs rating 15 content elements at three times). A statement of each

result follows below with reference to the relevant demographic characteristic (D.C.).

1. Subjects who spend more than 10% of their work time with subordinates observed greater use by others of "using your awareness wheel" than did those who spend 10% or less time with subordinates (D.C. "F"). This occurred at times one and three but not at time two.

2. Subjects who have only one supervisor observed greater use by others of "acknowledging" than did those who have two or more supervisors (D.C. "C"). This occured at times one and two then disappeared at time three.

3. Subjects who work with 15 or fewer peer level coworkers observed greater use by others of "inviting" than did those who work with more than 15 peers (D.C. "D"). This occured at times one and three but not at time two.

4. Subjects who spend more of their work time with others observed greater use by others of "contracting to work through an issue" than did those who spend more work time alone (D.C. "E"). This occured at times one and two then disappeared at time three.

5. The two subgroups observing greater use by others of "building self and other esteem" included: a) subjects who spend more than 10% of their work time with people not in their work unit versus those who spend 10% or less time with this group (D.C. "I") and b) those who are

more directed in their work by someone else versus those who are self directed (D.C. "J"). Each of these occured at times one and two then disappeared at time three.

That completes the presentation of results. The interpretation of these results, a discussion of the study's limitations, and recommendations for future study all follow in chapter four.

Chapter Four

Discussion

The purpose of this study was to answer the general question

How do participants perceive and use the content elements of WORKING TOGETHER (WT)?

To do this data was collected from seventeen workshop participants who rated the 15 WT content elements (see glossary in Appendix A) on each of the following parameters.

1. How well did workshop participants think they understood each content element at four time intervals?

2. To what extent was the basic idea of each content element new to participants?

3. How well did participants believe they could use each content element, first, based upon their ability prior to the workshop, and secondly, based upon their anticipated ability just after the presentation of the idea but before applying it outside the workshop?

4. How much did participants plan to make use of each content element after its presentation?

5. How much use did participants report having made of each content element at three time intervals after its presentation?

6. How effectively did participants think they had used each content element at three time intervals after its presentation?

7. How much did participants observe others with whom they worked using each content element at three time intervals after its presentation?

The results of data analysis are interpreted and discussed in the first section of this chapter. In section two, the research limita

them could recognize WT content elements as referring to something they had in fact used prior to the workshop.

This measure of how new the WT skills were to workshop participants suggests that the workshop materials are indeed based on ideas and behaviors that are common in human relations at work but that people may not be aware of or use very well. Considering the generally moderate to high dependent variable means generated in this survey, especially for the parameters of "understanding," "use," and "effectiveness," it can be said that WT brings important aspects of communication into focus for workshop participants and does so in ways they can use to improve their own perceived competence. Therefore, the workshop is likely to be a positive and worthwhile learning experience for workers who choose to attend.

These conclusions will be supported and elaborated throughout the remainder of this section. The data and statistical results will be viewed from three vantage points. In part "A," the ranges of extreme rating means for the seven specific research questions will be discussed to give a collective overview of subjects' impressions of the WT skills. Each range identifies both the highest and the lowest mean (non-repeated questions) or grand mean (repeated measures) generated from ratings on each question. In part "B," the grand ranking of content elements will be presented to suggest how subjects' valued them individually. This ranking results from averaging the rank of each content element by its mean or grand mean rating for all seven questions. In part "C," subjects' ratings of content elements will be interpreted for each question to explain any changes across time for

repeated-measure questions and to identify the probable influences of demographic factors on the magnitude of any mean.

A. Subjects' Overall Impressions of WT Contents

Several conclusions about how WT participants perceive and use its content elements can be drawn directly from the ranges of subjects' rating means for each of the seven specific research questions. Each range can be thought of as participants' general impression of all the workshop contents for any given question. There are actually eight ranges since question three has two parts. All eight are charted in Figure 4.1.

Each range shows the extreme means (non repeated questions) or grand means (repeated measures) representing the ratings of all 15 content elements for each of the research questions. While the Figure 4.1 chart serves to summrizes a great deal of complex information and provides a quick visual representation of the overall survey results, it does lack much depth of perspective. So, Figure 4.2 shows the diversity of individual responses by charting the standard deviations of rating means, since knowing the size of the variance of individual responses should add some missing depth at this level of interpretation.

By interpreting the ranges in Figure 4.1, it can be generally said that workers report gaining a good understanding of all 15 WT content elements and report retaining it over at least six weeks (question 1) regardless of how familiar they are with the kinds of human relations

Fig. 4.1. Ranges* of Extreme Means or Grand Means Representing Subjects' Ratings of All 15 WORKING TOGETHER Content Elements for Each of the Seven Research Questions.

	low** 1	2	moderate 3	4	5	high 6	7	extreme means
1 (understanding)	---	---	---	----	-X	-X	---	(5.57 6.57)
2 (newness)	---	-X-	---	-X-	---	---	-	(2.44 4.71)
3a (remembered ability)	---	----	X-	---	-X	---	- -	(3.13 5.63)
3b (anticipated ability)	---	---	---	-X-	----	X-	-	(4.06 - 6.19)
4 (planned use)	---	---	---	-X	- -	-X-	- -	(4.44 - 6.13)
5 (use)	---	---	-X-	----	----	-X	- -	(3.59 - 6.00)
6 (effectiveness)	---	-----	-X-	----	X-	--	- -	(3.74 - 5.86)
7 (observation of others use)	---	-X-	---	----	-X	- -	- -	(2.94 5.12)

*The X's marking each range were placed by rounding back rather than rounding off extreme means. This more conservative representation should help compensate for the small sample size.
**This rating scale measures ability (questions 1, 3a, 3b, & 6), frequency (questions 4, 5, and 7), and familiarity (question 2). For question #2, the lower the rating the "newer" the content element was to the respondent. Otherwise, any rank increases with the rating.

Fig. 4.2. Distribution of Standard Deviations for Mean Ratings on each of the Seven Research Questions.

	Research Questions 1	2	3a	3b	4	5	6	7
0.0 to 0.5	0	0	0	0	0	0	0	0
0.5 to 1.0	52	0	1	8	7	14	17	2
1.0 to 1.5	7	2	10	7	8	17	14	28
1.5 to 2.0	0	12	4	0	0	12	11	12
2.0 and up	0	1	0	0	0	2	2	2
Total	59*	15	15	15	15	45	44*	44*

*Since each pooling exception was eliminated from the results, this total reflects one less than would be expected.

skills included in this training (question 2) or how well they have used any similar interpersonal techniques prior to the workshop (question 3a). The ranges also suggest that the skills taught in WT can indeed be used in the workplace (question 5), and with moderate effectiveness (question 6) without regard to whether coworkers are noticably using similar skills or not (question 7).

Furthermore, once workers are exposed to the WT skills, they generally feel capable of using the skills (question 3b) and will plan to do so (question 4). Those who take the workshop and expect to use the skills frequently probably will, even though some workers will not use them as much as they might have expected (comparing questions 4 and 5). A workers' anticipated ability with the WT skills will probably be greater than their remembered ability with similar interpersonal techniques prior to the workshop, but their actual effectiveness with the skills will probably not be as great as their anticipated ability (comparing questions 3b, 3a, and 6). In fact, one's actual effectiveness may only be slightly, if at all greater than one's remembered ability (comparing questions 3a and 6).

The information in these statements needs some qualification. The sample population for this study numbered only 17 and included staff members from only one large organization. The generalizability of any conclusions is somewhat limited by the small size and homogeneouness of the sample.* To help compensate for this, the X's were placed by

-------(Footnote)
*For a detailed description of the sample subjects, see page 32f and Appendix D.

rounding back rather than rounding off the extreme means to the nearest whole number for a more conservative representation.

The Figure 4.1 chart represents 252 means some of which had been combined into grand means before ranks were assigned. For example, the range for question one (understanding) represents 15 grand means, but actually reflects 59* means since subjects rated their understanding of each element four different times. Similarly, ranges for questions five, six, and seven, each represent 15 grand means, but reflect 45 means for question five and 44* for questions six and seven since subjects rated elements three times for these three questions questions. Finally, the ranges for questions two through four each only represent the 15 means that result from non-repeated ratings of elements.

Moreover, many of the means represent a wide diversity of individual responses, and the ranges in the Figure 4.1 chart cannot reflect the large standard deviations of individual means. Figure 4.2 provides the necessary information for a more complete perspective to use when interpreting the ranges in Figure 4.1 by showing the diversity among individual ratings. For example, since the variances around individual means for "understanding" are relatively small, most at sd=1.0 or less, it can be said that individual ratings of

-------(Footnote)

*Since the pooling exceptions discussed in Appendix D were excluded from the analysis, questions one, six, and, seven each generated one less mean than would otherwise be expected.

"understanding" were generally greater than "4" on the scale and reflect high comparability of participants' workshop experiences. While, the variances around individual means for "use" or "effectiveness" are relatively greater, most ranging between sd=0.5 and 2.0, indicating much less comparability of participants' experiences.

In this subsection, the ranges of rating means for all the research questions were interpreted. It was concluded that subjects' overall impressions of the WT contents were positive and their workshop experience was worthwhile. In the next subsection, these general points are further elaborated in a discussion of how subjects valued each of the content elements.

B. Ranking of Individual Content Elements

A grand ranking of the 15 WT content elements reflecting their relative value was produced using each element's rank for all the research questions. Conseqently, it represents subjects' collective experience with individual elements on every dimension measured by the research questions across the time of the survey. To do this, subjects' rating means (non-repeated questions) or grand means (repeated measures) were ranked for each of the seven research questions, and these rankings were collected and summed in Figure 4.3. The following interpretation will focus on the grand ranking and discuss the eight ranks for individual content elements, plus the ranking of rating means for individual research questions. Finally, the limits of the data and its analysis will be explained.

Fig. 4.3. Ranks of Means or Grand Means and Sum of Ranks Representing Subjects' Ratings of the 15 WORKING TOGETHER Content Elements for All Seven Research Questions (RQ 1-7). (The ranking for each question was first presented in Chapter Three Figures 3.1, 3.4, 3.6, 3.8, 3.10, 3.12, 3.15, & 3.18.)

content elements	RQ1	RQ2	RQ3a	RQ3b	RQ4	RQ5	RQ6	RQ7	sum of ranks
speaking for self	6	5	4	6	9	5	4	3	42
using your awareness wheel	13	9	14	9	10	10	10	10	85
documenting interpretations	12	10	9	11	8	8	8	9	75
observing and listening	2	2	3	4	2	2	2	2	19
acknowledging	1	1	1	1	1	1	1	1	8
inviting	3	4	2	2	5	4	3	5	28
checking out	5	3	6	3	4	7	6	11	45
shared meaning process	7	7	7	7	11	15	12	14	80
styles of communication	8	14	12	12	6.5	6	7	4	69.5
flexibility in using styles	9	12	8	10	6.5	9	9	7	70.5
mixing messages	15	13	11	14	13	13	15	8	102
mapping an issue	10	8	13	13	14	11	11	12	92
contracting to work through an issue	11	11	15	15	15	14	14	13	108
trouble shooting	14	15	10	8	12	12	13	15	99
building self and other esteem	4	6	5	5	3	3	5	6	37

*The ranking of rating means for question two "newness" matches least rank to highest mean, making "trouble shooting" the newest. The other rankings match least rank to lowest mean.

First, the WT content elements can be divided by function into four basic categories. This logical break down reflects common distinctions made in human communication theory. The workshop presents skills for expression, listening, interaction management, and problem-solving. The first group, expression skills, includes the following:

1.* speaking for self,

2. using your awareness wheel, and

3. documenting interpretations.

The listening skills include:

4. observing and listening,

5. acknowledging,

6. inviting,

7. checking out, and

8. the shared meaning process.

Comprising the interaction management skills are:

9. the styles of communication,

10. flexibility in using styles,

11. mixing messages, and

15. building self and other esteem.

And last, the problem-solving skills include:

12. mapping an issue,

13. contracting to work through an issue, and

14. trouble shooting.

-------(Footnote)

*The elements are numbered as they are in Appendix A for quick reference to their definitions.

This theoretical breakdown may be used in combination with another criteria to help explain how subjects value individual WT content elements (see Fig. 4.4). The line-up of elements in the grand ranking suggests a categorical break down by level of skill difficulty. Three levels emerge in the analysis and reflect the relative difficulty subjects apparently had in using the skills. It is hypothesized that the degree of skill complexity can account for the position of elements in the grand ranking.

Fig. 4.4. Grand Ranking of the 15 WORKING TOGETHER Content Elements for All Seven Research Questions. (Derived from Fig. 4.3.)

1. acknowledging
2. observing and listening
3. inviting
4. building self and other esteem
5. speaking for self
6. checking out
7. styles of communication
8. flexibility in using styles
9. documenting interpretations
10. shared meaning process
11. using your awareness wheel
12. mapping an issue
13. trouble shooting
14. mixing messages
15. contracting to work through an issue

The first level of difficulty is dominated by the WT listening skills. "Acknowledging," "observing and listening," and "inviting" occupy the first three ranks while "checking out," a slightly more complex skill, holds rank six. The fifth and most complex listening skill, the "shared meaning process," ranks 10th.

The lower rank of "checking out" can be explained by its relative complexity. Someone who uses "checking out" must be a little more assertive and deliberate than when using "acknowledging," "observing and listening," or "inviting," each of which require more or less passive behavior. In fact, these three skills would be readily

observable in offering deference or attempting to psychologically "stroke" the other person. "Checking out" differs from them in that the user must be slightly confronting and let the other person know that s/he has given a confusing or incomplete disclosure. While the use of this listening skill will usually not scare others away, using it may be somewhat risky, especially for shy people, if not awkward for those trying to improve their skill. Still, "checking out" is noticed being used by coworkers relatively less often than two-thirds of the other skills. It ranks 11th on the question of "observation of others' use," lower than its fairly consistent rank of 3rd to 7th for the other questions. This may mean that its use is more limited by need or social acceptability than basic listening.

The "shared meaning process" is the most complex of the listening skills since it requires much more active and confrontive behavior. It is closely associated with conflict resolution and problem-solving. These communication situations are less likely to come up at work, day to day, than are all the possible situations that would simply require "acknowledging," "observing and listening," and "inviting." In fact, after subjects had a chance to use the "shared meaning process" back in their work settings, they reported using it the least of any of the 15 skills. Also, they saw it used by coworkers very infrequently compared to the other skills. These facts support the idea that this element is not used at work as much as others, a condition which may be due to less need or social acceptability. Probably skill complexity contributes to this disuse, since subjects also reported less "effectiveness" with this skill compared to the other ones.

The ranks for the "shared meaning process" across the seven research questions differ more than the ranks across questions for other skills. When rating this content elements for the questions of "understanding," "familiarity," "remembered ability," and "anticipated ability," research subjects rated it high enough to fill the 7th rank. Each of these questions was asked during the workshop, before subjects had a chance to use it outside. However, at that same time subjects' plans for using the "shared meaning process" were relatively less than for other skills. The data give no clue as to why the ranks for "planned use," "use," "effectiveness," and "observation of others' use" dropped so low following the consistent and middle level ranks for the first four questions. The results do suggest that subjects' experience with this element differed from their experience with the others, all of which held more consistent ranks across questions, except for "using your awareness wheel" and "documenting interpretations." For these two, the discrepency between the first four and the second four ranks is the reverse of what occurs with the "shared meaning process." In these cases, the second four are higher than the first, but the difference is not as great.

Subjects may be expressing though their ratings of these skills that basic listening dominates much of their interaction time at work. This is supported in the literature where some claim that listening comprises as much as 75% or more of normal human communication behavior. No doubt, basic listening behaviors are needed most often, while engaging in more active listening like the "shared meaning process," and even "checking out," happens less frequently, is more

personally demanding and complex, and may even be harder to observe and evaluate oneself doing.

Suggesting a second level of difficulty, both the interaction management and expression skills dominate the middle ranks. The "styles of communication" and "flexibility in using styles" rank in the very middle at 7th and 8th, respectively, and seem appropriately ranked since they involve more complex behaviors than the basic listening skills, but are less specialized than the problem solving ones. Their use obviously requires the behavioral knowledge and flexibility to effectively manage one's on-going relationship with another person. Therefore, it demands more conscious attention than simply listening, yet the opportunities to apply them are more frequently available than are problem-solving situations. Meanwhile, of the other two interaction management skills, "building self and other esteem" ranks unexpectedly higher at 4th with "mixing messages" predictably lower at 14th.

"Building self and other esteem" may have been rated more for its desirability than for its complexity as an interpersonal technique. Using it is fairly complex since it requires the effective combined use of virtually all the other skills, but more importantly, because it is an attitude to guide one's use of them. Therefore, its expected rank would be much lower. Its actual rank among the first five may indicate that listening is the primary set of behaviors used by subjects to do "building self and other esteem." When using it, the user must assume an attitude that honors both him/herself and the other. That should be reflected in ones listening, expression, and interaction management.

Emphasizing one or another type of skill more than others would not be inconsistent with the instructions for how to perform "building self and other esteem." However, regardless of what mixture of contributing skills are used to perform it, it would be desirable for frequent use just because of the potential positive outcome. In fact, it was used relatively often; it ranks 3rd for "use." In relation to other skills, subjects not only used this one often but also observed coworkers using it more frequently. Their relative effectiveness appears only slightly less positive than amount of "use."

The fourth interaction management skill, "mixing messages" is ranked predictably low. The workshop teaches it as a negative interaction skill and one not to use. Judging from the ranks occupied by this skill on all questions, it was experienced appropriately. But, it may be that the negative quality of this skill, more than complexity accounts for these rankings. For example, subjects' ability seems to have faded with time. Their ratings for "remembered ability" ranked relatively higher than their "anticipated ability" which rated higher than their "effectiveness." Although from the beginning, subjects' "understanding" of this skill was relatively less than of any other. Consequently, it seems reasonable to question whether the negative quality of "mixing messages" did not influence subjects' ratings more than its complexity, the present hypothesized decision factor.

This middle level of difficulty is as much a home for the expression skills as for the interaction management ones. "Speaking for self," the least complex expression skill, ranks a little higher than the middle five at rank five. It simply refers to what its name

implies, making your own thoughts known, but this requires being sure enough of your thoughts to feel that they are worth knowing to others. Not all people are able to do this very well, and it may be inappropriate in some social positions in the workplace. However, since the subject group in this study was primarily comprised of supervisors, one could expect this expression skill to rank a little higher than the other two. It does hold a confusingly low rank on the question of "planned use." On all other questions, even for amount of "use," it holds a fairly consistent ranking of 3rd to 6th. "Documenting interpretations" ranks 9th and seems appropriately ranked, since it requires the conscious monitoring of ones sensory experience, both internal and external, to be able to put into words whatever stimulates any opinion, conjecture, judgement, etc., that one expresses. "Using your awareness wheel," which is equally or more complex than "documenting interpretations," ranks lower at 11th. It requires acknowledging and expanding ones self-awareness in five specific areas which are collectively inclusive of ones conscious experience. One must also appropriately disclose this information given the situation.

The complexity of each expression skill is more than for just chatting or joking. Together they refer to making the effort to be assertive, concrete, and more complete in one's self-expression. In doing so, they involve more complex behaviors than the basic listening skills, but are less specialized than the problem-solving ones.

Yet a third level of difficulty is suggested in ranks 11 through 15 where all the problem-solving skills are grouped along with "using your awareness wheel," perhaps the most difficult expression skill, and "mixing messages," described above as a skill not to use.

The problem-solving skills are complex because each involves detailed tasks and has specialized uses. They require: 1) getting agreement from others on the exact nature of a problem or task along with a commitment to work on it, 2) soliciting coworkers' ideas and opinions in an inviting way, and 3) democratically choosing viable solutions and gaining willing commitments to implement them under an agreement to evaluate the outcome at a specific later date. Such a course of interaction is not easy to orchestrate even with the most cooperative group, and it can be easily sabotaged by any of the members. The three problem-solving skills are designed to work in concert when a work group confronts its tasks. Moreover, all the other WT skills are recommended for use in the process of using these three. Therefore, finding these skills ranked at the lowest relative rating level along with the one subjects' were taught not to use "mixing messages" is no suprise.

Even in rankings for the questions asking about amount of "use" and "effectiveness," these three problem-solving skills share the bottom five ranks with "using your awareness wheel," the personal awareness expansion model adapted to groups in "mapping an issue." The bottom four of this group also hold the bottom four ranks for "observation of others' use." Apparently, problem-solving as outlined in the use of these WT skills is infrequently used in subjects' normal

work lives. "Trouble shooting" was the least familiar of all 15 skills. Also, the problem-solving skills fill low ranks for "understanding," while the rating means for all skills were high for this question.

Thus, with few exceptions the relative value of WT content elements to research subjects can be explained by the existence of three levels of skill complexity and the frequency of skill use. Both theories actually go hand in hand. The more complex a skill is, the less often situations will arise for which it will be appropriate. The more often situations arise calling for a certain skill, the less complex the appropriate skill turns out to be. This can be attributed to human adaptability. It is the uncommon case, the one that resists being dealt with by habitual, almost automatic responses, that ends up requiring more elaborate interactions which may include new or, at least, unpracticed and awkward behaviors. Inevitably, these less used behaviors remain unpracticed and awkward since they are relatively complex.

Moreover, the resistant situations arise out the need to adapt, eg., problem-solving or conflict resolution. If such adaptation tasks do not arise, then everything goes more smoothly for people who work together. When adaptation is needed, the people involved must leave their comfortable, "maintenance-type," interaction patterns to deal with wars of will, insecurities, aggression, laziness, unyielding zeal, ineptitude, creative blocks, etc.. Leaving standard behavior patterns can easily leave one feeling vulnerable and defensive, if not irrational and insensitive. Inevitably, coping with not only these

situations, but also individuals' reactions to them requires more complex interaction techniques so long as the interactants want to adapt positively, eg., generating solutions and resolving conflicts, versus negatively, eg., breaking off the interaction.

By drawing all seven research questions together, the grand ranking factors in, so to speak, every dimension of subjects' experience that was surveyed. These dimensions include familiarity, pre-workshop experience, pre-practice ability projection and plan for use, as well as, observation of others in the work environment. In addition to these are what might be called the essential dimensions, i.e., "understanding," amount of "use," and "effectiveness." The other dimensions add depth to this discussion depending on the extent to which they are actually discrete factors (a fact yet to be established). However, their inclusion does little if anything to affect the general outcome. Summing the ranks for only the essential dimensions yields about the same grand ranking (Fig. 4.5). There are only two differences. The elements now ranked 10th, "mapping an issue," and 12th, the "shared meaning process," are reversed and so are the 14th and 15th ranks still held by "contracting to work through an

Fig. 4.5. Grand Ranking of the 15 WORKING TOGETHER Content Elements for Research Questions #1, #5, & #6.

1. acknowledging
2. observing and listening
3. inviting
4. building self and other esteem
5. speaking for self
6. checking out
7. styles of communication
8. flexibility in using styles
9. documenting interpretations
10. mapping an issue
11. using your awareness wheel
12. shared meaning process
13. trouble shooting
14. contracting to work through an issue
15. mixing messages

issue" and "mixing messages." The latter is insignificant, but the former bears some comment. It appears that the relatively high ratings given the "shared meaning process" during the workshop but before any chance to apply the skill outside, accounts for its higher position in the grand ranking.

This interpretation of the rankings of WT content elements by subjects' rating means must be put in perspective by the fact that these ranks do not directly reflect the size of the means that they represent. This is a special hazard when trying to compare ranks for research question five with question four for example. Any noticable difference in them may actually represent no difference or a reverse relation between the actual means that the ranks represent. It is necessary to check the actual means and standard deviations to assess the comparability of any cross-question comparisons. This is due to the fact that neither individual content elements nor individual resarch questions can be considered discrete factors in this research. The sample size is too small to analyze this statistically.

The conclusions in this subsection have been drawn with this statistical limitation in mind. Additional research with a larger subject population and a more rigorous study design could analyze whether the content elements are discrete factors and whether the specific research questions measure discrete dimensions of subjects' experience. The foregoing interpretation assumes that elements and questions are discrete, but remains conservative and tentative since that has not been demonstrated.

In this subsection, the ranking of the WT content elements by subjects' rating means for the seven research questions was interpreted. It was generally concluded that the relative value of these elements can be predicted by the complexity of the skill involved and the frequency of its use. However, the ranking of three elements cannot be explained so simply. "Building self and other esteem" ranked higher than expected and may have been rated more for its positive quality than for its complexity, even while it was used frequently. "Mixing messages" ranked low as expected, but was probably rated more for its negative qualities than for its complexity or frequency of use. Finally, while the position of the "shared meaning process" in the grand ranking was not suprising, its relative value on the first three research questions ranks consistently mid-level but strangely higher than on the four questions referring to its use following its introduction in the workshop. No explanation was found for this, while a reverse, less discrepent, and no better understood result was noticed for "using your awareness wheel" and "documenting interpretations."

In the next subsection, information about changes in ratings across time for repeatedly measured questions and the possible influences of demographic factors on subjects' ratings of elements for all questions will be examined to further elaborate the conclusions drawn so far.

C. Rating Changes Across Time and Demographic Influences

Subjects rated the WT content elements repeatedly throughout the eight weeks of the survey on four question: "understanding," "use,"

"effectiveness," and "observation of other use." An analysis of these ratings reveal whether subjects' experience changed significantly across time or not, thereby indicating any improvement in one of these dimensions with any of the WT skills. The results show that ratings for five of the skills increased significantly on repeated measures.

Subjects' "understanding" of the "styles of communication" (see Fig. 3.2) improved significantly by the second rating for this question (mr=1.72 to mr=2.78) which occurred after they had a chance to apply this skill outside the workshop. This skill received ratings at the higher lever twice more (mr=2.81 and mr=2.69). No demographic factors were statistically associated with subjects' ratings of this skill. Therefore, some learning effect happened for all subjects after applying this skill in their work setting and remained for at least six weeks.

Subjects' "use" of "inviting" (see Fig. 3.13) increased significantly by the second rating for this question (mr=1.47 to mr=2.26) which came a few days after the entire workshop was completed. The third and last rating was equally high (mr=2.26). None of these ratings was statistically associated with any demographic factor. So, some change in all subjects' desires or perhaps their opportunities to use this skill occurred after they were once introduced to all the skills and had a chance to use them together. It remained for at least six weeks.

Subjects' "effectiveness" when using "observing and listening" (see Fig. 3.16) increased by the second rating for this question

(mr=1.41 to mr=2.38) which was made a few days following the end of the workshop. Again six weeks later, subjects' effectiveness with this skill was rated at the higher level (mr=2.21). No demographic characteristic was statistically associated with the ratings of "observing and listening" on this question. Hence, it can be said that all subjects improved in their use of this skill, once introduced to all 15 skills and following some practice with all of them. This level of effectiveness remained for at least six weeks.

This change in subjects' "effectiveness" when using "observing and listenting" may account for their increased "use" of "inviting" or vice versa. Indeed, both might account for subjects' increased "understanding" of the "styles of communication." However, the reverse is more likely since the improvement in "understanding" took place at an earlier rating time and conceivably stimulated more "inviting" and better "observing and listening." Suffice it to say that these three statistics appear to be related. (Even so, they cannot be tested for any relationship.) The timing of the increases in ratings of these three skills on the three different questions might indicate that it was the use of them together, i.e., once all were presented in the workshop and subjects had a chance to apply them outside, that improved the ratings across time.

Subjects' "observations of others' use" of "speaking for self" (see Fig. 3.19) increased gradually from the first (mr=1.50) to the second (mr=2.03) and third (mr=2.47) rating times. These ratings are not associated statistically with any of the demographic characteristics. This information indicates that subjects either

became gradually sensitized to others "speaking for self" or actually found more and more of this happening in the workplace.

Subjects may have stimulated the growing incidence of coworkers "speaking for self" with their own increased use of "inviting" and improvement in "observing and listening." While these two changes in subjects' behavior could have easily done this together, better "observing and listening" alone could account for the possibility that subjects simply identified more often their coworkers' actual use of "speaking for self." However, since both changes in subjects' behavior did take place, it can be hypothesized that their own improved communication improved noticably their coworkers' communication.

Subjects' ratings of "checking out" increased significantly for three research questions at the second rating time which happened a few days after the close of the workshop. This increased rating level continued through the last of three measurements for each of these questions. Subjects' "use" of "checking out" (see Fig. 3.13) increased (mr=1.50 to mr=2.32 and then mr=2.18), their "effectiveness" (see Fig. 3.16) improved (mr=1.41 to mr=2.35 and then mr=2.24), and their "observations of others' use" (see Fig. 3.19) increased (mr=1.44 to mr=2.29 and then mr=2.26). One demographic characteristic was statistically associated with the ratings of this skill, but only for the questions of "use" and "effectiveness."

This characteristic identified two subgroups whose separate ratings of "checking out" for each of these two questions differed significantly on both the first and second evaluations (see Fig. 3.14

and Fig. 3.17). The seven subjects who were spending more than 25% of their worktime with peer level coworkers (subgroup A) used this skill more and better than the 10 who were spending 25% or less of their work time with peers (subgroup B). How well one uses this skill is undoubtedly tied to how often one uses it and that is the apparent explanation for the difference on the question of "effectiveness." These results also suggest that there may be more need to use "checking out" if at least one fourth of ones work time is spent with peer-level coworkers. However, it may also mean that one may feel more at ease using this skill with peers, but the data do not reveal with whom a subject used this skill. It is clear, though, that as much as 75% of their work time these seven subjects were with someone other than peers if not alone. So, the correlation may indicate that subjects found it easier, more necessary, or both to use "checking out" with non-peers as long as they spent at least 25% of their work time with peers. Suffice it to say that the information available in this result is so ambiguous that the cause of this difference can not be explained. It may be that this skill should be taught differently, perhaps by using specialized exercises to have subjects pratice its use in more threatening interactions like with bosses or strangers. Nonetheless, it is clear that subjects used "checking out" more and better shortly after the workshops' close than at first, and maintained these higher levels at least six weeks.

Before making any change in teaching strategy, though, the difference between these two groups on their ratings of "checking out" should be validated and explored by additional research. The

difference does not occur at the third rating time which suggests that it is short lived anyway. It is also true that the percentage of time one spends with peer-level coworkers is not an independent variable. This characteristic correlates significantly with six other demographic items: 1) the number of supervisors one has, 2) the amount of work time spent with subordinates, 3) the amount of work time spent alone, 4) the extent to which one speaks ones mind, 5) how satisfied one is with how well one deals with people at work, and 6) the degree to which one prefers to plan ones work (see Appendix E). While numbers two and three would be expected, the other four would have to be sorted out to really know whether it was just the time one spends at work with peers that really made the difference for the ratings of these subgroups or not. After that, subjects' use and effectiveness when using "checking out" with only peer-level coworkers would have to be isolated before the exclusive impact of this demographic factor could be assessed. It is not apparent at this time that doing this would be very important especially since subjects' grand mean ratings (with the subgroups combined) for this skill are m=5.10 for "use" and m=5.01 for "effectiveness." These grand means might be improved but it seems premature to target any one subgroup, especially based on the "time with peers" demographic factor.

The influence of demographic characteristics on subjects' rating means for any WT content element on individual research questions may be complicated by the statistical relationship between several of the characteristics, eg., the correlation of "time with peers" with the other six characteristics (see Appendix E). For the following

discussion of the demographic factors that do influence rating means, it is assumed that each one is discrete. While this is not quite accurate, it is important for reducing confusion in the discussion. With this assumption, any statistical association of a demographic characteristic with subjects' ratings of some element can be seen as no more than simply indicative of some influence, i.e., the rating mean would not have been so high or low if it were not for the contribution of the subgroup being studied. Each correlation is automatically subject to validation through further study, however, additional research will only be recommended for those correlations that are important to demonstrating the impact of the workshop on participants' perceptions and use of the skills.

Nineteen demographic characteristics correlate with the 15 WT content elements. Correlations occur with ratings for each of the research questions. Each one is stated as well as reported in statistic form in Chapter Three, but they must be taken together now to sort out the ones that offer any information to this study. The lot can be categorized by using four classifications: 1) unexpected and important, 2) expected and worthy of note, 3) expected but without consequence, and 4) ambiguous. The following discussion is concerned with how each of these correlations helps explain participants perceptions and use of the WT content elements. Therefore, they will be considered primarily for their positive contribution to subjects' rating means and discussed in that light.

These correlations will be presented by grouping the ones belonging to any one demographic characteristic and reporting them

together in each of the categories. The "unexpected and important" ones will be discussed first and followed by the others in the above given sequence. In addition, the correlation of ratings for two content elements on several questions and with several characteristics will receive special attention. In an effort to shorten this presentation and avoid laborious repetition, it should be understood that each statement of correlation will refer to only one of the two subgroups and use relative terms to refer to an unspoken counterpart subgroup. Using relative terms will avoid having to repeatedly refer to this counterpart every time.

Subjects who have been in their current job for more than 10 years were less familiar with "mapping an issue" and planned less use of it (Fig. 3.5 & 3.11, D.C. "A"). It is suprising that this skill was newer to them since they could be expected to have experience with problem solving methods. While it may be true that these subjects were unfamiliar with such methods, it also may be that these more seasoned workers, mostly supervisors, were rating this skill more for its "new" formulation than for its basic function. The fact that they planned less use of it could be expected especially since it was new and they may have their own, completely satisfying alternative (that is if they had any problems with which to deal). These correlations may mean that people who are set in their ways still stand a chance of finding something new but not necessarily better.

It could not be expected that subjects who find it easy to talk through problems at work would have been less familiar with "documenting interpretations" (Fig. 3.5, D.C. "N"). This group should

be using this skill if they are actually confronting conflicts. It is less suprising but equally unexpected that subjects who find talking through problems difficult used "mapping an issue" and "contracting to work through an issue" more (Fig. 3.14, D.C. "N"). Apparently, the workshop inspired this behavior and can be helpful to participants of this type.

Another correlation of importance involved subjects who enjoy dealing with people less than other aspects of their job. This subgroup remembered that before the workshop they could use something like "building self and other esteem" and "documenting interpretations" better (Fig. 3.7, D.C. "P"). Yet, the same subgroup reported understanding "building self and other esteem" less, while it planned to use the skill more (Fig. 3.3 & 3.11, D.C. "P"). It is suprising that this subgroup having remembered using a skill similar to WT's "building self and other esteem," doing it relatively well, and even planning to use the WT skill more, would also have relatively less understanding of it. The real significance of this result is that those who enjoy dealing with people relatively little, would remember having used and even plan to use a skill exclusively designed to enhance relationships. Their lesser understanding may imply, however, that while its use may be attractive, the attractiveness will not stimulate any more than average use, and in the end average use will not improve understanding.

Another suprise is that subjects who rarely speak their mind at work planned more use of "documenting interpretations" (Fig. 3.11, D.C. "O"). This same subgroup also used "trouble shooting" more and better

(Fig. 3.14 & 3.17, D.C. "O"). Apparently, the workshop had an impact on these subjects, perhaps in their need for better self-expression at work. In another case, subjects who are dissatisfied with their human relations effectiveness at work understood "observation and listening" better (Fig. 3.3, D.C. "R"). This may indicate some effort to improve their relations through better listening.

It could be expected that subjects who have been in their current jobs 10 years or less anticipated more use of "mapping an issue" and "contracting to work through an issue" (Fig. 3.11, D.C. "A"). Nonetheless, it seems important to mention since this group with less longevity contains people trying to establish a problem-solving and conflict management style that will work well in their supervisory roles. The WT methods are apparently attractive to them.

It is also no suprise that subjects who are dissatisfied with their human relations effectiveness at work were less familiar with "documenting interpretations" (Fig. 3.5, D.C. "R") or that their counterparts who are very satisfied with their human relations remembered and anticipated greater ability with "inviting" (Fig. 3.7 & 3.9, D.C. "R"). Yet, each of these correlations points to the importance of these skills for effective communication. Likewise, it is important that subjects who tend to be directive supervisors were less familiar with "mapping an issue" (Fig. 3.5, D.C. "K"). This skill requires a more participative management style.

Quite a number of correlations just make common sense, but probably made little if any significant contribution to subjects'

rating means, since people who experience positive human relations and communication would already be familiar with and understand the WT skills better. Moreover, they would use them more often with greater effect, and may even notice others using the skills more frequently. Nonetheless, since they do correlate significantly, they will be listed for the sake of a complete discussion.

Subjects who prefer more planning in doing their work anticipated greater ability with "observing and listening," the "shared meaning process," "mapping an issue," and "contracting to work through an issue" (Fig. 3.9, D.C. "S"). They also planned more use of "using your awareness wheel" (Fig. 3.11, D.C. "S"). Someone who is more farsighted and deliberate, as a "planner" would be, is also likely to use such skills. The counterpart subgroup, those who prefer to respond-on-the-spot, understood the "styles of communication" better (Fig. 3.3, D.C. "S"). It makes sense that a skill connoting variety would be understood better by someone who prefers spontaneity.

Subjects who have been in their current job more than 10 years anticipated greater use of "building self and other esteem" and "documenting interpretations" (Fig. 3.11, D.C. "A"). They also remembered a greater ability with something similar to "documenting interpretations" (Fig. 3.7, D.C. "A"). These long-term job holders could be expected to use these skills more, especially having remembered using one well before the workshop.

Subjects who found it easy to talk through problems at work anticipated greater ability with the "styles of communication" and

"flexibility in using styles" (Fig. 3.9, D.C. "N"). This same group also remembered greater ability with something like WT's "styles of communication" and planned more use of the WT skill (Fig. 3.7 & 3.11, D.C. "N"). No doubt since these people are more assertive they are already more flexible with a variety of interaction styles.

It is believed that good listening is important to people who enjoy dealing with people or who have more contact with familiar people than with strangers. Supporting this idea, it turns out that subjects who enjoy dealing with people at work more than other aspects of their jobs understood "acknowledging" better (Fig. 3.3, D.C. "P"). Also, in a case involving subjects who have more contact with familiar people rather than strangers at work, they were more familiar and anticipated greater ability with "checking out" (Fig. 3.5 & 3.9, D.C. "Q"). For similar reasons, subjects who work with 15 or fewer peer-level coworkers planned more use of "inviting," a skill which they also observed others using more often (Fig. 3.11 & 3.20, D.C. "D"). This same subgroup understood "checking out" better and were more familiar with "trouble shooting" (Fig. 3.3 & 3.5, D.C. "D"). These correlations may reflect the nature of a more intimate work group, one having 15 or fewer compared to a larger one. For similar reasons, subjects who have more contact with familiar people while working were more familiar with "observing and listening" and "inviting" (Fig. 3.5, D.C. "Q"). Also supporting this idea about listening skills, the more laissez faire supervisors planned more use of "observing and listening" and understand "checking out" better (Fig. 3.11 & 3.3, D.C. "K").

Subjects who spend 10% or less of their work time with people

outside their workgroup planned more use of "speaking for self," "mapping an issue," and "contracting to work through an issue" (Fig. 3.11, D.C. "I"). They also happened to be more familiar with "speaking for self" (Fig. 3.5, D.C. "I"). This is all predictable since spending 10% or less time with outsiders means that these workers were spending 90% or more with their coworkers, no doubt a group with a greater task orientation and more inclined to use problem-solving skills. For similar reasons, it is no suprise that people who spend more work time alone would likely be less familiar with "using your awareness wheel" and "flexibility in using styles" (Fig. 3.5, D.C. "E").

More use of "flexibility in using styles" was planned by subjects who almost always feel free to speak their mind at work (Fig. 3.11, D.C. "O"), but it could be expected that freely speaking ones mind would include style flexibility. This group was also more familiar with "mixing messages" (Fig. 3.5, D.C. "O"). It may be that people who are more bold or less self conscious in self-expression either use or observe this skill more.

It is no suprise that supervisors who give more structured work assignments would be less familiar with "inviting" and "observing and listening" (Fig. 3.5, D.C. "M"). And with this information about "observing and listening," it could be expected that the counterpart subgroup, those who give more unstructured assignments, would plan more use of this skill (Fig. 3.11, D.C. "M"). It is no more a suprise that subjects who spend more work time with others than alone would use "building self and other esteem" better and observe others using "contracting to work through an issue" more often (Fig. 3.17 & 3.20,

D.C. "E"). Neither would likely happen more for people spending more time alone.

Finally among the unsuprising correlations of demographic characteristics with subjects' ratings of content elements, those who are self-directed in their work remembered greater ability with something akin to WT's "mapping an issue" and those who supervised more than 10 people remembered greater ability with something like WT's "using your awareness wheel" (Fig. 3.7, D.C. "J" & "B"). Self-directed people are likely to have used problem-solving methods and that they used them better is no suprise, nor is it extraordinary that supervisors of many people would have been constructively self-conscious.

The rest of the correlations reported in Chapter Three indicating demographic influences on subjects' ratings of WT content elements are ambiguous, but can still be listed for the sake of completeness in this discussion. In every case, when the characteristic is read, regardless of which subgroup is to be featured in the statement, it defines no factors which might account for the particular element being rated as it was for the question involved. Each will be stated with respect to a counterpart subgroup as has been done in the foregoing interpretation.

Subjects who prefer more planning in doing their work were less familiar with "inviting" (Fig. 3.5, D.C. "S"). Those who work with more than 15 peer-level coworkers planned less use of "mixing messages" (Fig. 3.11, D.C. "D"). Those who spend 10% or less of their work time

with people outside their work unit observed others using "building self and other esteem" more often (Fig. 3.20, D.C. "I"). Those who are directive supervisors were more effective when using the "shared meaning process" (Fig. 3.17, D.C. "K"). Those who spend 10% or less of their work time with their superiors remembered greater ability with something like WT's "building self and other esteem" and "trouble shooting," anticipated greater ability with "inviting," and were less familiar with the "shared meaning process" (Fig. 3.7, 3.9 & 3.5, D.C. "G"). Subjects who spend 25% or less of their work time with peers remembered greater ability with something like WT's "building self and other esteem" and used this WT skill more effectively (Fig. 3.7 & 3.17, D.C. "H"). Those who only have one supervisor were less familiar with "checking out" and observed others using "acknowledging" more often (Fig. 3.5 & 3.20, D.C. "C"). Their counterpart group, those who have more than one supervisor, planned more use of "trouble shooting" (Fig. 3.11, D.C. "C"). Subjects who spend more than 10% of their work time with subordinates remembered greater ability with something like WT's "building self and other esteem" and observed others' use of "using your awareness wheel" more often (Fig. 3.7 & 3.20, D.C. "F"). Those who do their work more under the direction of someone else than themselves observed others' use of "building self and other esteem" more often (Fig. 3.20, D.C. "J"). Finally, those who receive more unstructured work assignments from their supervisor(s) understood "mixing messages" better (Fig. 3.3, D.C. "J").

In this subsection, changes in subjects' ratings of the WT content elements for repeated-measure questions were interpreted and the

influence of demographic factors on subjects' ratings for all research questions was discussed. Several elements received significantly higher ratings as time passed. Subjects' understanding of the "styles of communication," their use of "inviting," their effectiveness when using "observing and listening," and their observation of others' use of "speaking for self" all increased across time. None of these changes were associated with any particular demographic characteristic and they seem to be teaching effect of the workshop. Subjects' use, effectiveness when using, and observations of others' use of "checking out" all increased too. Their use and effectiveness with this skill were statistically related to one demographic factor. This factor is too ambiguous, however, to attribute the change to it.

The demographic factors that were statistically related to subjects' ratings of content elements were classified by one of four categories: 1) unexpected and important, 2) expected and worth noting, 3) expected but without consequence, and 4) ambiguous. Several of the important ones should be reviewed. "Mapping an issue" and "contracting to work through an issue" may be especially useful to people in their jobs for less than 10 years. People who avoid conflicts may find "documenting interpretations" to be a new skill and those that rarely speak their mind at work may plan to use this skill. People who have difficulty confronting problems may find special use for "mapping an issue" and "contracting to work through an issue." People who do not especially enjoy dealing with people may find that they will use "building self and other esteem" even though they do not understand it perfectly. The rest of the correlations reflect the probable influence

that demographic characteristics had on subjects' rating but do not offer any information worth noting. The ones that are summarized here could be explored further in subsequent research but do not now belie any unnecessarily high or low rating mean which would need further explanation.

At this point, the second and third sections of this chapter may be presented. The second discusses the limitations of the study and the third is devoted to recommendations for future research.

II. Limitations of the Study

The limitations of this study relate to the sample and to the design. First, it is important to discuss the limits to generalizability, and then some comments can be made about the value of having control and comparison groups.

The present sample was limited by its size and homogeneity. The original group of thirty-seven workshop participants represented a cross section of the administrative staff in a large organization. Individuals from different levels of the decision making process and with different supervisory responsibilities all came to the workshop. The entire group though, came from the main campus of just one large university but from various offices and departments. None of this original group worked side-by-side except for two pairs who were a supervisor and his/her subordinate. One of these pairs worked closely together, the other did not. It cannot be said whether these associations affected the survey results. It is likely that any future

workshop would be similarly composed. This original group was evenly distributed by sex and age. The 46% who actually completed the entire survey and constitute the sample closely resemble the original group. (Full demographic information is reported in Appendix D).

The results of this study would be stronger and more interesting if the sample was larger and more diverse. Comparisons could have been made using groups from more than one general setting or with different instructors. Observer ratings could have been collected to augment subjects self-ratings. It would also be interesting to compare the effects on a closely working team against the effects on a group like the present one. An attempt was made to broaden the survey population, but access to other settings and instructors could not be arranged.

Several aspects of the design have also limited the results. In the beginning, this study was designed to describe phenomena not test hypotheses. This objective tends to be broader in scope. The research attitude has to be more open than critical, and the results tend to be less certain, especially without a large enough sample for factor analysis.

The small sample prevented any factor of content elements or research questions. Kerlinger (1973, p.681n) recommends ten subjects for each measurement in order to use factor analysis effectively. This would have required 2550 subjects since the 15 content elements were each rated 17 times. The untested possibility in this study, is that the elements or the questions may represent fewer factors than their actual number. The demographic characteristics are equally ambiguous.

Appendix E discusses the intercorrelation in these characteristics many of which should be related. Still, to attribute cause these factors must be discrete. Further clarification of them could be made through additional testing with a large enough subject pool.

The small sample size helped determine the selection of nonparametric statistical tests for data analysis. Conventionally, a sample of at least 30 is needed to use parametric tests. While non-parametric analysis may not be as strong, the inappropriateness of parametric analysis for attitude and behavior measures is clear even if the sample did include 2550 subjects. Siegel (1956) explains that non-parametric statistics are generally more appropriate for measures of all human attitudes and most of their behaviors. His recommendations rest on the assumptions behind the use of non-parametric versus parametric theories. Human thoughts, memories, or even their observations of phenomena cannot be calibrated accurately enough. Interval data must be achieved.

The design of this study has limits, too. Having two groups or more would have made it possible to compare treatment effects under different conditions and with controls. The present study did set out with higher ambitions but no additional groups were found.

III. Recommendations

This study has shown that WT participants can vary greatly in their experience of workshop components, even though the program in general is a positive experience. It is worth further investigation

and several recommendations can be made now. They are given in three categories: 1.) sampling, 2.) instrumentation, and 3.) study design.

Sampling: Further studies should attempt to establish a sufficient sample to clearly identify the factors that influence the results. If a large company could be located, for example, that would support this research, then more subjects, perhaps even more diversified ones, could be surveyed.

Instrumentation: Future studies should use smaller questionnaires. Based on Kirkpatrick's (1975) recommendations, a measure of understanding, reported use, and effectiveness would be adequate, and it appears that simply measureing of anticipated use and ability might suffice.

The survey could be reduced to a simple study of the problem solving skills and the styles of communication alone and be valuable. More than just a general evaluation is needed concerning their practicality and effectiveness as management tools. Another approach would be to use measures of esteeming behavior and interaction style parameters, then require peers or independents to report. It should go into more depth and use a longer follow up, since each of these appear to have great potential as important human relations tools.

Study Design: With more subjects, more complex designs would be possible. First, having a control group could establish comparative rather than simply descriptive results. Also, having a number of

groups would permit testing of different teaching strategies of comparisons of this workshop with others, etc..

If fewer parameters are used, fewer questionnaires could be used. Even if the instrument became a little lengthy, it would be sufficient to just measure parameters following the completion of the training and again six weeks later. Additional measures could even be used to trace longer term effects.

In summary, this study has shown that participants in the WORKING TOGETHER training program experience the components of the workshop positively and make use of the skills involved. Further study is recommended especially focusing on the communication styles and problem solving strategies. Measuring the training's effects on esteeming behavior and interaction style flexibility should be included in future investigations of this workshop.

References

Allen, Ronald R., and Brown, Kenneth L.. DEVELOPING COMMUNICATION COMPETENCE IN CHILDREN. Skokie, IL: National Textbook Co., 1976.

Argyris, Chris. "Explorations in Interpersonal Competence, Part I." JOURNAL OF APPLIED BEHAVIORAL SCIENCES, 1965, 58-83.

Argyris, Chris. "Explorations in Interpersonal Competence, Part II." JOURNAL OF APPLIED BEHAVIORAL SCIENCES, 1965, 255-269.

Argyris, Chris. INTERPERSONAL COMPETENCE AND ORGANIZATIONAL EFFECTIVENESS. Homeward, IL: Dorsey Press, Inc., 1962.

Argyris, Chris. ORGANIZATION AND INNOVATION. Homeward, IL: Dorsey Press, Inc., 1965.

Blake, Robert R., and Mouton, Jane S.. THE MANAGERIAL GRID. Houston, TX: Gulf Publishing Company, 1964.

Bochner, Arthur P., and Kelly, Clifford W.. "Interpersonal Communication Instruction -- Theory and Practice: A Symposium. I. Interpersonal Competence: Rationale, Philosophy, and Implementation of a Conceptual Framework." THE SPEECH TEACHER, 1974, 23 (1), 279-301.

Francis, Dave, and Young, Don. IMPROVING WORK GROUPS: A PRACTICAL MANUAL FOR TEAM BUILDING. San Diego, CA: University Associates, 1979.

Goffman, Irving. INTERACTION RITUALS. Garden City, NJ: Anchor, 1967.

Goldhaber, Gerald M.. ORGANIZATIONAL COMMUNICATION, (2nd ed.). Dubuque, IO: Wm. C. Brown Company Publishers, 1979.

Hersey, Paul, and Blanchard, Kenneth H.. MANAGEMENT OF ORGANIZATIONAL BEHAVIOR: UTILIZING HUMAN RESOURCES, (3rd ed.). Englewood Cliffs, NJ: Prentice-Hall, Inc., 1977.

Kerlinger, Fred N.. FOUNDATIONS OF BEHAVIORAL RESEARCH, (2nd ed.). New York: Holt, Rinehart and Winston, 1973.

Kirkpatrick, Donald L.. EVALUATING TRAINING PROGRAMS. Madison, WI: American Society for Training and Development, 1975.

Larson, Carl; Backlund, Phil; Redmond, Mark; and Barbour, Alton. ASSESSING FUNCTIONAL COMMUNICATION. Falls Church, VA: Speech Communication Association, 1978.

Likert, Rensis. THE HUMAN ORGANIZATION. New York: McGraw-Hill Book Company, 1969.

Miller, Sherod. "The Effectiveness of Communication Training in Small Groups Upon Self Disclosure and Openness in Engaged Couples' Systems of Interaction: A Field Experiment." Ph.D. Dissertation, University of Minnesota, 1971.

Miller, Sherod; Nunnally, Elam W.; and Wackman, Daniel B.. COUPLE COMMUNICATION I: TALKING TOGETHER. Minneapolis, MN: Interpersonal Communication Programs, Inc., 1980.

Miller, Sherod; Wackman, Daniel B.; Demmitt, Dallas R.; and Demmitt, Nancy J.. WORKING TOGETHER: IMPROVING COMMUNICATION ON THE JOB. Minneapolis, MN: Interpersonal Communication Programs, Inc., 1980.

Miller, Sherod; Wackman, Daniel; Nunnally, Elam; and Saline, Carol. STRAIGHT TALK: THE WAY TO GET CLOSER TO OTHERS BY SAYING WHAT YOU REALLY MEAN. New York: Rawson, Wade Publishers, Inc., 1981.

Nunnally, Elam. "Effects of Communication Training upon Interaction Awareness and Empathy Accuracy of Engaged Couples: A Field Experiment." Ph.D. Dissertation, University of Minnesota, 1971.

Reilly, Anthony J., and Jones, John E.. "Team-Building." In J. William Pfeiffer and John E. Jones, (eds.), THE 1974 ANNUAL HANDBOOK FOR GROUP FACILITATORS. LaJolla, CA: University Associates, 1974.

Roark, Albert E., and Wilkerson, Linda. "Approaches to Conflict Management." GROUP AND ORGANIZATIONAL STUDIES, 1979, 4, 448.

Siegel, Sidney. NONPARAMETRIC STATISTICS FOR THE BEHAVIORAL SCIENCES. New York: McGraw-Hill Book Co., 1956.

Wampler, Karen S.. "The Effectiveness of the Minnesota Couple Communication Program: A Review of Research." JOURNAL OF MARITAL AND FAMILY THERAPY, 1982, July, 345-354.

Wiemann, John. "An Experimental Investigation of Communicative Competence in Initial Interactions." Doctoral Dissertation, Purdue University, 1976.

Williams, Fredrick. REASONING WITH STATISTICS, (2nd ed.). New York: Holt, Rinehart and Winston, 1979.

Appendix A

The WORKING TOGETHER Content Elements

The WT Content Elements

The WT text develops a set of "skills," "procedures," and "frameworks" for workshop participants to learn. Chapter Two describes the way that this list was transformed to better reflect what workshop participants thought the actual content elements were. The 15 content elements that were defined for this study are listed first followed by the authors' list of 19. Glossary definitions of these 15 come on the next page.

The 15 WT Content Elements as Determined in the Preliminary Study.

1. speaking for self
2. using your awareness wheel
3. documenting interpretations
4. observing and listening
5. acknowledging
6. inviting
7. checking out
8. shared meaning process
9. styles of communication
10. flexibility in using styles
11. mixing messages
12. mapping an issue
13. contracting to work through an issue
14. trouble shooting
15. building self and other esteem

The 19 "Skills," "Procedures," and "Frameworks" Developed in the WT Text.

Skills:

1. speaking for self
2. making sense statements
3. making interpretive statements
4. making feeling statements
5. making intention statements
6. making action statements
7. observing and listening
8. acknowledging
9. inviting
10. checking out

Procedures:

11. documenting interpretations
12. shared meaning process
13. flexibility in using styles
14. contracting to work through an issue
15. trouble-shooting

Frameworks:

16. awareness wheel
17. styles of communication
18. mapping an issue
19. I count/I count you

1. SPEAKING FOR SELF refers to making self-responsible rather than over- or under-responsible statements.

2. USING YOUR AWARENESS WHEEL refers to making statements from all parts of your Awareness Wheel (including: sense statements, interpretive statements, feeling statements, intention statements, and action statements) when you express yourself.

3. DOCUMENTING INTERPRETATIONS refers to making sense and/or feeling statements to clarify the interpretive statements you make.

4. OBSERVING AND LISTENING refers to noticing the expressions and gestures of the person with whom you are communicating, as well as, hearing and understanding him/her.

5. ACKNOWLEDGING refers to nodding to the other person or otherwise indicating that you are listening and understanding.

6. INVITING refers to asking the other person questions or otherwise encouraging him/her to say more.

7. CHECKING OUT refers to repeating what you heard the other person say, then, asking if that's right or just asking him/her questions to help you get what's being expressed more clearly or completely.

8. SHARED MEANING PROCESS refers to having someone agree to repeat back to you what you say so you can confirm or correct the accuracy of your message.

9. STYLES OF COMMUNICATION refer to the six styles which people use when communicating: 1) small talk, 2) light control talk, 3) heavy-active control talk, 4) heavy-passive control talk, 5) search talk, and 6) straight talk.

10. FLEXIBILITY IN USING STYLES refers to being able to use any of the "styles of communicating" when it is appropriate.

11. MIXING MESSAGES refers to you or other people overlapping control talk with any of the other three styles.

12. MAPPING AN ISSUE refers to following the six steps (1. identifying the issue, 2) contracting to work through an issue, 3) understanding the issue, 4) identifying intentions, 5) generating solutions and taking action, and 6) evaluating the outcome) when working through an individual or group issue.

13. CONTRACTING TO WORK THROUGH AN ISSUE refers to step #2 of "mapping an issue," yet more specifically to 1) selecting a clearly defined issue, 2) determining individual committments to resolving the issue, and 3) deciding on who will meet when, where, and for what before moving on to step #3.

14. TROUBLE SHOOTING refers to first doing three things; 1) stepping outside the conversation, 2) facing the fears of vulnerability and of consequences, and 3) examining intentions; then, using the 4) trouble-shooting checklist which checks both how you used the "mapping" procedures and your use of other communication skills

15. BUILDING SELF AND OTHER ESTEEM refers to using the "I count/I count you" framework to become aware of your counting behavior toward self and others, then, making changes if needed to show prizing of yourself and of others.

Appendix B

The Research Survey

The Research Survey

This appendix contains a reproduction of the 12 survey questionnaires and explanatory materials that were completed by the subjects in this study. First is the introductory letter and permission statement which was given out with the demographic questionnaire at the beginning of the first workshop session. Next, come the five questionnaires that were given at the end of each workshop session. The instruction sheet introducing them was printed on the opposite side of the actual questionnaires. Next come the four questionnaires that were given at the beginning of sessions two through five and they are preceeded by their instruction sheet that was printed on the back side of each. Finally, questionnaires #11 and #12 are presented. Each came complete with a reorientation letter, an instruction sheet, and a content element glossary.

Dear Participant,

Several people who offer Working Together (W.T.), including your leader today, want to discover how valuable the program may be to you and others like you. To do this, we ask you to complete a few brief questionaires during the course of the workshop. In addition, we will send you a follow-up questionaire four to six weeks after the program and would like you to complete it as well.

These forms will not take much of your time and we hope you will answer all questions.

Your involvement in this evaluation is requested, but by no means mandatory. You may freely voluteer to participate or choose not to do so. We are interested in your personal responses, yet, your questionaires will be numbered and remain annonymous. If you prfer not to participate, please make that known now. If you are willing to be involved, please follow the instructions below.

To perform this evaluation we need your name and mailing address. Please sign your name below, then, print it out to insure legibility. Your signature indicates your permission for us to use information gathered from you. Remember though, you will not be personally identified in any report of this study. Next, clearly print your mailing address so we can send you follow-up questionaires. As a final task, note the number written in the upper right corner of this page. Each questionaire that you complete needs to have this number!! Please remember it. Write it in your W.T. manual if you like so you can check to make sure your questionaires carry your identification number. THANK YOU.

Sincerely,

Layne E. Hood

Layne E. Hood
Evaluation Coordinator

Signature:_____ **Name:**_____

Date:_____ **Address:**_____

_____

_____

Now, please provide the following information.

1. How long have you been in your present job position?_____yrs_____mos.

2. If you have ever before held a similar job position, how long were you in it?_____yrs_____mos.

3. For how many employees are you the main supervisor?_____.

4. For how many employees do you provide less than half their supervision? _____.

5. How many people serve as your supervisor?_____.

6. How many people do you work with who are neither you superiors nor your subordinates (this includes all co-workers not included in the three immediately preceding questions)?_____.

7. Did you ask to come to Working Together?_____. Were you asked or told to come to this workshop?_____.

8. Have you attended other communication workshops or classes?_____. If so, how many?_____. Was the last one within the last six months?_____ within the last year?_____.

9. Have you ever attended a Couples Communication workshop?_____. Have you ever read either Alive and Aware, Talking Together, or Straight Talk (all books by the same authors as W.T.)?_____.

Now, think of your usual work activities and how you generally divided up your work either when working alone or with others. Next, indicate how you fit on the continuum for each of the questions which follow. Use an "X" to do this and put it clearly on only one space along each continuum.

EXAMPLE: Do you work best when your work setting is

generally messy? ___ X ___ ___ ___ ___ ___ generally neat?
1 4 7

A university professor answered our sample question. He decided that he worked best in a setting that was much closer to "messy" than to "neat," but not "generally messy." Had he decided for "generally neat," his "X" would have gone on the seventh space. Had he decided for half-way in between, his "X" would have been placed on the fourth space.

10. What proportion of your work time do you

work alone? ___ ___ ___ ___ ___ ___ ___ work with others?

11. Of the time you work with others, what percent is spent with

_____ subordinates

_____ superiors

_____ peers (co-workers in your unit)

_____ people not in your unit (other workers, consumers, etc.)

(Total should add to 100%, e.g., 55% + 15% + 20% + 10% = 100%)

12. What proportion of your work is

decided by you? ___ ___ ___ ___ ___ ___ ___ directed by someone else?

13. If you are a supervisor, to what extent do you

tell your subordinates what to do? ___ ___ ___ ___ ___ ___ ___ let your subordinates do their work as they think best?

14. What proportion of the work assignments you get are

highly structured? (detailed, regulated, etc.) ___ ___ ___ ___ ___ ___ ___ unstructured? (general, flexible, etc.)

15. What proportion of the work assignments that you give are

highly structured? ___ ___ ___ ___ ___ ___ ___ unstructured?

16. At work, is talking through the problems that arise usually

difficult for you? ___ ___ ___ ___ ___ ___ ___ easy for you?

17. How important is how you deal with people to the success of your work?

very important ___ ___ ___ ___ ___ ___ ___ not important

18. To what extent do you feel free to speak your mind on the job? (e.g., question, disagree, suggest ideas, etc.)

rarely ___ ___ ___ ___ ___ ___ ___ almost always

19. How much do you enjoy dealing with people at work?

more than other aspects of my work	___ ___ ___ ___ ___ ___ ___	less than other aspects of my work

20. To what extent are the people you contact at work

the same every day?	___ ___ ___ ___ ___ ___ ___	new to you?

21. How satisfied are you with how well you deal with people at work?

not satisfied	___ ___ ___ ___ ___ ___ ___	very satisfied

22. When I do my work I like to

plan ahead.	___ ___ ___ ___ ___ ___ ___	respond-on-the-spot.

23. I came to the Working Together training workshop

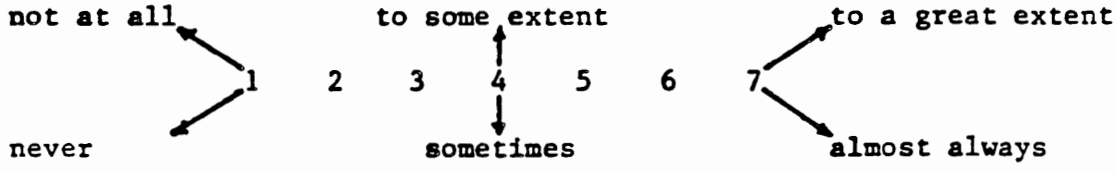
eagerly.	___ ___ ___ ___ ___ ___ ___	reluctantly.

Instruction Sheet for Questionnaires

Numbered 2, 4, 6, 8, and 10

Each part of Working Together (W.T.) presents certain basic ideas about communication and some skills to use in your work setting. This questionaire calls these ideas and skills "ITEMS" and asks you to assess the ones you have worked with today.

To do this, we want you to answer some questions for each ITEM. On the back of this page you will find five questions. Each has an arrow pointing to a single column among those along the left side of the page. The columns are marked off in rows. As you can see, each ITEM has its own row. This set up allows you to rate each ITEM on each of the five questions. For questions one through five, use the continuum defined as



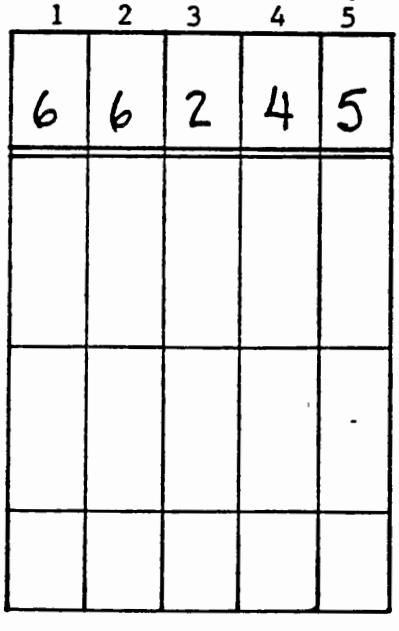
We just need you to select a number along this seven point continuum, then to have you put that number in the blank which corresponds with both the ITEM and the question on which you are rating it.

A sample ITEM is the first one on the back of this page. An office manager named Ruth responded to our sample ITEM. She selected "6" to rate "STATING INTENTIONS" on the first question. She indicates by doing so, that she understands the ITEM pretty well, but that "STATING INTENTIONS" is still slightly vague or fuzzy. Had Ruth understood it as well as she thought she could, she would have put a "7" in the blank. Had she understood it slightly less than she did, she might have put "4" or "3." Had she understood it "not at all," she would have written "1." On question five, Ruth put "5" to indicate that she intends to use the ITEM often or frequently, but not "almost always." Had she intended to use it sometimes, but less than often, she might have put a "3" or "4." Had she decided to use it "never." Ruth would have put "1." On questions two, three, and four, Ruth rated the ITEM 6, 2, and 4, respectively. You find all five numbers (6, 6, 2, 4, and 5) in the row for "STATING INTENTIONS." For each rating, Ruth makes a decision based on the continuum above.

The ITEMS for you to rate now are listed below the sample. A glossary definition comes with each one.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How new is this basic idea to you?
3. How well could you do this ITEM before W.T.?
4. How well can you do this ITEM now?
5. Between now and the next session, how much will you use this ITEM in your work?



SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6 7
never			sometimes			almost always

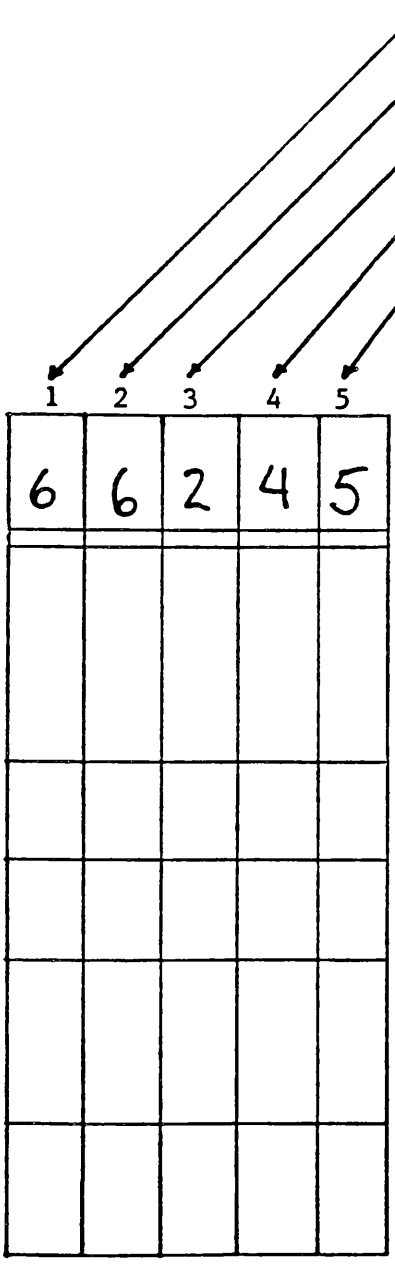
STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

SPEAKING FOR SELF refers to making self-responsible rather than over- or under-responsible statements.

USING YOUR AWARENESS WHEEL refers to making statements from all parts of your Awareness Wheel (including: sense statements, interpretive statements, feeling statements, intention statements, and action statements) when you express yourself.

DOCUMENTING YOUR INTERPRETATIONS refers to making sense and/or feeling statements to clarify the interpretive ones you make.



QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How new is this basic idea to you?
3. How well could you do this ITEM before W.T.?
4. How well can you do this ITEM now?
5. Between now and the next session, how much will you use this ITEM in your work?

SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6 7
never			sometimes			almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

OBSERVING AND LISTENING refers to noticing the expressions and gestures of the person with whom you are communicating, as well as, hearing and understanding him/her.

ACKNOWLEDGING refers to nodding to the other person or otherwise indicating that you are listening and understanding.

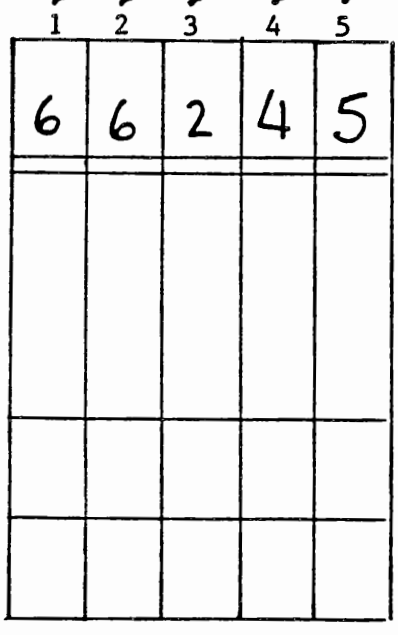
INVITING refers to asking the other person questions or otherwise encouraging him/her to say more.

CHECKING OUT refers to repeating what you heard the other person say, then asking if that's right or just asking him/her questions to help you get what's being expressed more clearly or completely.

SHARED MEARNING PROCESS refers to having someone agree to repeat back to you what you say so you can confirm or correct the accuracy or your message.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How new is this basic idea to you?
3. How well could you do this ITEM before W.T.?
4. How well can you do this ITEM now?
5. Between now and the next session, how much will you use this ITEM in your work?



1	2	3	4	5
6	6	2	4	5

SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6 7
never			sometimes			almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

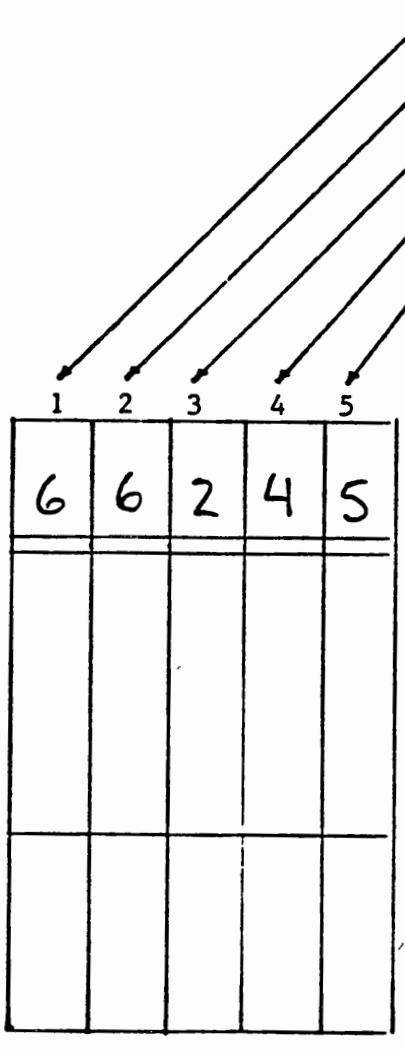
STYLES OF COMMUNICATION refer to the six styles which people use when communicating: 1) small talk, 2) light control talk, 3) heavy-active control talk, 4) heavy-passive control talk, 5) search talk, and 6) straight talk.

FLEXIBILITY IN USING STYLES refers to being able to use any of the styles of communicating when it is appropriate.

MIXING MESSAGES refers to you or other people overlapping control talk with any of the other three styles.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How new is this basic idea to you?
3. How well could you do this ITEM before W.T.?
4. How well can you do this ITEM now?
5. Between now and the next session, how much will you use this ITEM in your work?



SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6 7
never			sometimes			almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

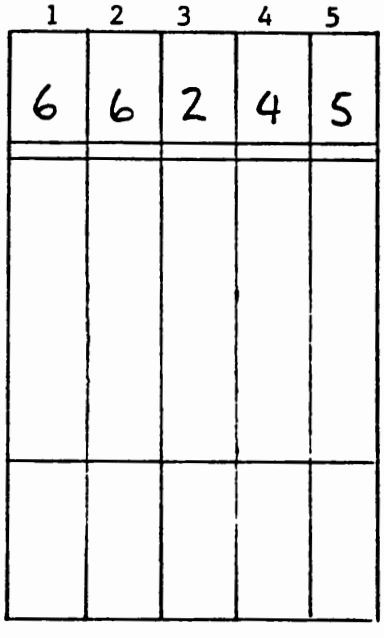
ITEMS:

MAPPING AN ISSUE refers to following the six steps (1. identifying the issue, 2) contracting to work through an issue 3) understanding the issue, 4) identifying intentions, 5) generating solutions and taking action, and 6) evaluating the outcome) when working through an individual or group issue.

CONTRACTING TO WORK THROUGH AN ISSUE refers to step #2 of "mapping an issue," yet more specifically to 1) selecting a clearly defined issue, 2) determining individual committments to resolving the issue, and 3) deciding on who will meet when, where, and for what before moving to step #3.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How new is this basic idea to you?
3. How well could you do this ITEM before W.T.?
4. How well can you do this ITEM now?
5. Between now and the next session, how much will you use this ITEM in you work?



SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6 7
never			sometimes			almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

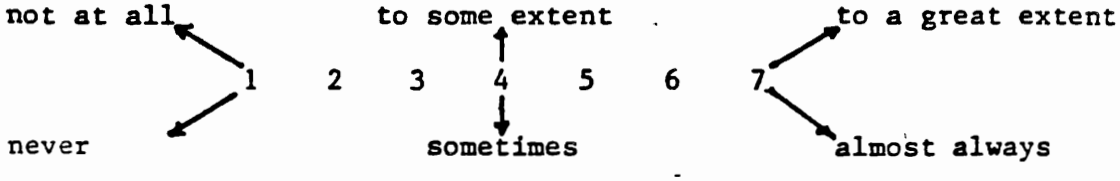
TROUBLE SHOOTING refers to first doing three things; 1) stepping outside the conversation, 2) facing the fears of vulnerability and of consequences, and 3) examining intentions then, using the 4) trouble-shooting checklist which checks bot how you used "mapping" procedures and your use of the other communication skills.

BUILDING SELF AND OTHER ESTEEM refers to using the "I count/ I count you" framework to become aware of your counting behavior toward self and others, then, making changes if neede to show prizing of yourself and of others.

Instruction Sheet for Questionnaires Numbered 3, 5, 7, and 9

Each part of Working Together (W.T.) presents certain basic ideas about communication and some skills to use in your work setting. This questionaire calls these ideas and skills "ITEMS" and asks you to assess the ones you have worked with since the last session.

To do this, we want you to answer some questions for each ITEM. On the back of this page you will find four questions. Each has an arrow pointing to a single column among those along the left side of the page. The columns are marked off in rows. As you can see, each ITEM has its own row. This set up allows you to rate each ITEM on each of the four questions. For questions one through four, use the continuum defined as:



We just need you to select a number along this seven point continuum, then to have you put that number in the blank which corresponds with both the ITEM and the question on which you are rating it.

A sample ITEM is the first one on the back of this page. An office manager named Ruth responded to our sample ITEM. She selected "7" to rate "STATING INTENTIONS" on the first question. She indicates by doing so, that she understands the basic idea of the ITEM "to a great extent." Had Ruth understood it less than she thought she could, she would have put a "5" or "6" in the blank. Had she understood it "not at all," she would have put a "1." On question number four, Ruth rates "STATING INTENTIONS" with a "2." This indicates that she observes others using the ITEM slightly more than "never." Had she noticed others using the ITEM sometimes, she might have put a "3" or "4." Had she noticed it often, she might have put a "5" or "6." On questions two and three, Ruth rated the ITEM "3" and "4," respectively. You find all four numbers (7, 3, 4, and 2) in the row for STATING INTENTIONS. For each rating, Ruth makes a decision based on the continuum above.

The ITEMS for you to rate now are listed below the sample. A glossary definition comes with each one.

When you answer each question, think of your communication with others at work.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How much have you used this ITEM since the last session of Working Together?
3. How effectively did you use this ITEM when you did?
4. How much have you noticed others with whom you work using this ITEM since the last session?

1	2	3	4
7	3	4	2

SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6 7
never			sometimes			almost always

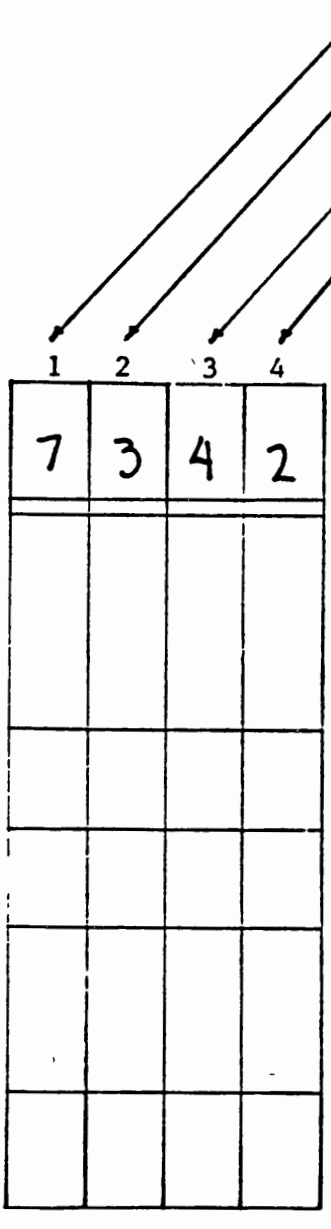
STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

SPEAKING FOR SELF refers to making self-responsible rather than over- or under-responsible statements.

USING YOUR AWARENESS WHEEL refers to making statements from all parts of your Awareness Wheel (including: sense statement interpretive statements, feeling statements, intention statements, and action statements) when you express yourself.

DOCUMENTING YOUR INTERPRETATIONS refers to making sense and/or feeling statements to clarify the interpretive ones you make.



QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How much have you used this ITEM since the last session of Working Together?
3. How effectively did you use this ITEM when you did?
4. How much have you noticed others with whom you work using this ITEM since the last session?

SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6 7
never			sometimes			almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

OBSERVING AND LISTENING refers to noticing the expressions and gestures of the person with whom you are communicating, as well as, hearing and understanding him/her.

ACKNOWLEDGING refers to nodding to the other person or otherwise indicating that you are listening and understanding.

INVITING refers to asking the other person questions or otherwise encouraging him/her to say more.

CHECKING OUT refers to repeating what you heard the other person say, then asking if that's right or just asking him/her questions to help you get what's being expressed more clearly or completely.

SHARED MEANING PROCESS refers to having someone agree to repeat back to you what you say so you can confirm or correct the accuracy of your message.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How much have you used this ITEM since the last session of Working Together?
3. How effectively did you use this ITEM when you did?
4. How much have you noticed others with whom you work using this ITEM since the last session?

1	2	3	4
7	3	4	2

SAMPLE:

not at all			to some extent			to a great exten
	1	2	3	4	5	6 7
never			sometimes			almost alway

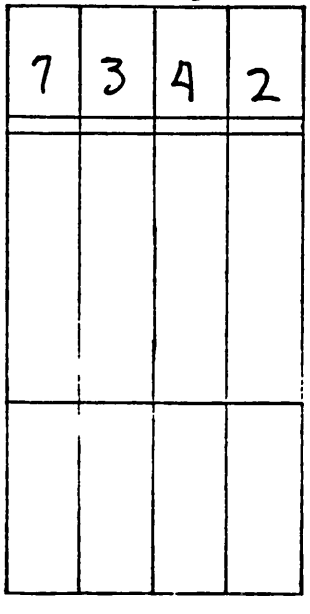
STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

STYLES OF COMMUNICATION refer to the six styles which people use when communicating: 1) small talk, 2) light control talk 3) heavy-active control talk, 4) heavy-passive control talk, 5) search talk, and 6) straight talk.

FLEXIBILITY IN USING STYLES refers to being able to use any of the styles of communicating when it is appropriate.

MIXING MESSAGES refers to you or other people overlapping control talk with any of the other three styles.



QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How much have you used this ITEM since the last session of Working Together?
3. How effectively did you use this ITEM when you did?
4. How much have you noticed others with whom you work using this ITEM since the last session?

SAMPLE:

not at all		to some extent				to a great extent
	1 2	3	4	5	6	7
never		sometimes				almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS:

MAPPING AN ISSUE refers to following the six steps (1: identifying the issue, 2) contracting to work through an issue, 3) understanding the issue, 4) identifying intentions, 5) generating solutions and taking action, and 6) evaluating the outcome) when working through an individual or group issue.

CONTRACTING TO WORK THROUGH AN ISSUE refers to step #2 of "mapping an issue," yet more specifically to 1) selecting a clearly difined issue, 2) determining individual committments to resolving the issue, and 3) deciding on who will meet when, where, and for what before moving to step #3.

Reorientation Letter, Instruction Sheet, and Glossary of Terms for Questionnaires Numbered 11 and 12

3090 Wescoe
University of Kansas
Lawrence, KS 66045

Dear Participant,

A few days have passed since you finished your Working Together workshop. Now, we want to continue our evaluation by having you complete the attached questionaire.

On the two pages that follow, you will find 1) explicit instruction, 2) a glossary of all fifteen ITEMS, 3) a rating sheet for all fifteen ITEMS on four questions, and 4) a sheet for you to use to indicate where you used the ITEMS and with whom. This fourth sheet is different from what you have used before. It carries complete instructions. You simply remember the settings where you used ITEMS, then remember with whom you were interacting, and indicate this person by putting the appropriate letter in the box which identifies the setting. More than one person may be in any box.

We appreciate your cooperation in this evaluation. This study will help us to understand how people react to the kind of training W.T. provides. Please complete the entire questionaire and do so as soon as you can. After completing it, send it back to me in the self-addressed return envelope. If you wish, we will send you a summary of the results. THANK YOU!

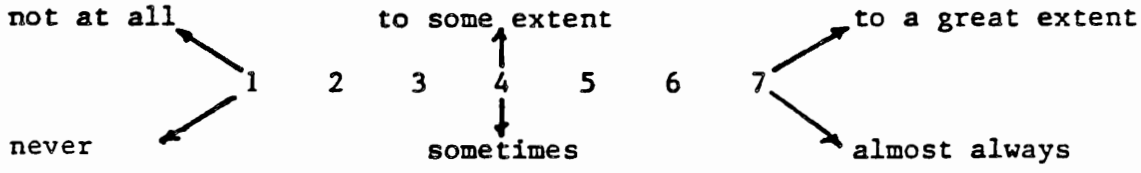
Sincerely,

Layne E. Hood

Layne E. Hood
Evaluation Coordinator

Each part of Working Together (W.T.) presents certain basic ideas about communication and some skills to use in your work setting. This questionaire calls these ideas and skills "ITEMS" and asks you to assess the ones you have worked with since the last session.

To do this, we want you to answer some questions for each ITEM. On page three you will find four questions. Each has an arrow pointing to a single column among those along the left side of the page. The columns are marked off in rows. As you can see, each ITEM has its own row. This set up allows you to rate each ITEM on each of the four questions. For questions one through four, use the continuum defined as:



We just need you to selct a number along this seven point continuum, then to have you put that number in the blank which corresponds with both the ITEM and the question on which you are rating it.

A sample ITEM is the first one on page three. An office manager named Ruth responded to our sample ITEM. She selected "7" to rate "STATING INTENTIONS" on the first question. She indicates by doing so, that she understands the basic idea of the ITEM "to a great extent." Had Ruth understood it less than she thought she could, she would have put a "5" or "6" in the blank. Had she understood is "not at all," she would have put a "1." On question number four, Ruth rates "STATING INTENTIONS" with a "2." This indicates that she observes others using the ITEM slightly more than "never." Had she noticed others using the ITEM sometimes, she might have put a "3" or "4." Had she noticed it often, she might have put a "5" or "6." On questions two and three, Ruth rated the ITEM "3" and "4," respectively. You find all four numbers (7, 3, 4, and 2) in the row for STATING INTENTIONS. For each rating, Ruth makes a decision based on the continuum above.

The ITEMS for you to rate now are listed below the sample. As you will notice, the ITEMS are identified only by a simple phrase. A glossary definition for each phrase comes on the back of this page (i.e., on page two).

When you answer each question, think of your communication with others at work.

1. SPEAKING FOR SELF refers to making self-responsible rather than over- or under-responsible statements.

2. USING YOUR AWARENESS WHEEL refers to making statements from all parts of your Awareness Wheel (including: sense statements, interpretive statements, feeling statements, intention statements, and action statements) when you express yourself.

3. DOCUMENTING INTERPRETATIONS refers to making sense and/or feeling statements to clarify the interpretive statements you make.

4. OBSERVING AND LISTENING refers to noticing the expressions and gestures of the person with whom you are communicating, as well as, hearing and understanding him/her.

5. ACKNOWLEDGING refers to nodding to the other person or otherwise indicating that you are listening and understanding.

6. INVITING refers to asking the other person questions or otherwise encouraging him/her to say more.

7. CHECKING OUT refers to repeating what you heard the other person say, then, asking if that's right or just asking him/her questions to help you get what's being expressed more clearly or completely.

8. SHARED MEANING PROCESS refers to having someone agree to repeat back to you what you say so you can confirm or correct the accuracy of your message.

9. STYLES OF COMMUNICATION refer to the six styles which people use when communicating: 1) small talk, 2) light control talk, 3) heavy-active control talk, 4) heavy-passive control talk, 5) search talk, and 6) straight talk.

10. FLEXIBILITY IN USING STYLES refers to being able to use any of the "styles of communicating" when it is appropriate.

11. MIXING MESSAGES refers to you or other people overlapping control talk with any of the other three styles.

12. MAPPING AN ISSUE refers to following the six steps (1. identifying the issue, 2) contracting to work through an issue, 3) understanding the issue, 4) identifying intentions, 5) generating solutions and taking action, and 6) evaluating the outcome) when working through an individual or group issue.

13. CONTRACTING TO WORK THROUGH AN ISSUE refers to step #2 of "mapping an issue," yet more specifically to 1) selecting a clearly defined issue, 2) determining individual committments to resolving the issue, and 3) deciding on who will meet when, where, and for what before moving on to step #3.

14. TROUBLE SHOOTING refers to first doing three things; 1) stepping outside the conversation, 2) facing the fears of vulnerability and of consequences, and 3) examining intentions; then, using the 4) trouble-shooting checklist which checks both how you used the "mapping" procedures and your use of other communication skills

15. BUILDING SELF AND OTHER ESTEEM refers to using the "I count/I count you" framework to become aware of your counting behavior toward self and others, then, making changes if needed to show prizing of yourself and of others.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How much have you used this ITEM since the last session of Working Together?
3. How effectively did you use this ITEM when you did?
4. How much have you noticed others with whom you work using this ITEM since the last session?

SAMPLE:

not at all		to some extent				to a great extent
	1	2	3	4	5	6	7	
never			sometimes			almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

1	2	3	4

ITEMS: (On the back side of the instruction sheet you will find a glossary for all of these ITEMS.)

1. SPEAKING FOR SELF
2. USING YOUR AWARENESS WHEEL
3. DOCUMENTING INTERPRETATIONS
4. OBSERVING AND LISTENING
5. ACKNOWLEDGING
6. INVITING
7. CHECKING OUT
8. SHARED MEANING PROCESS
9. STYLES OF COMMUNICATION
10. FLEXIBILITY IN USING STYLES
11. MIXING MESSAGES
12. MAPPING AN ISSUE
13. CONTRACTING TO WORK THROUGH AN ISSUE
14. TROUBLE SHOOTING
15. BUILDING SELF AND OTHER ESTEEM

3090 Wescoe
University of Kansas
Lawrence, KS 66045

Dear Participant,

A few weeks have passed since you finished your Working Together workshop. Now, we want to finish our evaluation by having you complete the attached questionaire.

On the two pages that follow, you will find 1) explicit instructions, 2) a glossary of all fifteen ITEMS, 3) a rating sheet for all fifteen ITEMS on four questions, and 4) a sheet for you to use to indicate where you used the ITEMS and with whom. This fourth sheet carries complete instruction just like questionaire #11 had. Again, you simply remember the settings where you used ITEMS, then remember with whom you were interacting, and indicate this person by putting the appropriate letter in the box which identifies the setting. More than one person may be in any box.

We appreciate your cooperation in this evaluation. This study will help us to understand how people react to the kind of training W.T. provides. Please complete the entire questionaire and do so as soon as you can. After completing it, send it back to me in the self-addressed return envelope. THANK YOU.

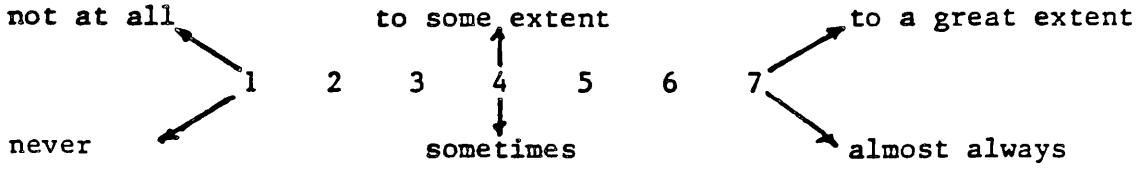
Sincerely,

Layne E. Hood

Layne E. Hood
Evaluation Coordinator

Each part of Working Together (W.T.) presents certain basic ideas about communication and some skills to use in your work setting. This questionaire calls these ideas and skills "ITEMS" and asks you to assess the ones you have worked with since the last session.

To do this, we want you to answer some questions for each ITEM. On page three you will find four questions. Each has an arrow pointing to a single column among those along the left side of the page. The columns are marked off in rows. As you can see, each ITEM has its own row. This set up allows you to rate each ITEM on each of the four questions. For questions one through four, use the continuum defined as:



We just need you to selct a number along this seven point continuum, then to have you put that number in the blank which corresponds with both the ITEM and the question on which you are rating it.

A sample ITEM is the first one on page three. An office manager named Ruth responded to our sample ITEM. She selected "7" to rate "STATING INTENTIONS" on the first question. She indicates by doing so, that she understands the basic idea of the ITEM "to a great extent." Had Ruth understood it less than she thought she could, she would have put a "5" or "6" in the blank. Had she understood is "not at all," she would have put a "1." On question number four, Ruth rates "STATING INTENTIONS" with a "2." This indicates that she observes others using the ITEM slightly more than "never." Had she noticed others using the ITEM sometimes, she might have put a "3" or "4." Had she noticed it often, she might have put a "5" or "6." On questions two and three, Ruth rated the ITEM "3" and "4," respectively. You find all four numbers (7, 3, 4, and 2) in the row for STATING INTENTIONS. For each rating, Ruth makes a decision based on the continuum above.

The ITEMS for you to rate now are listed below the sample. As you will notice, the ITEMS are identified only by a simple phrase. A glossary definition for each phrase comes on the back of this page (i.e., on page two).

When you answer each question, think of your communication with others at work.

1. SPEAKING FOR SELF refers to making self-responsible rather than over- or under-responsible statements.

2. USING YOUR AWARENESS WHEEL refers to making statements from all parts of your Awareness Wheel (including: sense statements, interpretive statements, feeling statements, intention statements, and action statements) when you express yourself.

3. DOCUMENTING INTERPRETATIONS refers to making sense and/or feeling statements to clarify the interpretive statements you make.

4. OBSERVING AND LISTENING refers to noticing the expressions and gestures of the person with whom you are communicating, as well as, hearing and understanding him/her.

5. ACKNOWLEDGING refers to nodding to the other person or otherwise indicating that you are listening and understanding.

6. INVITING refers to asking the other person questions or otherwise encouraging him/her to say more.

7. CHECKING OUT refers to repeating what you heard the other person say, then, asking if that's right or just asking him/her questions to help you get what's being expressed more clearly or completely.

8. SHARED MEANING PROCESS refers to having someone agree to repeat back to you what you say so you can confirm or correct the accuracy of your message.

9. STYLES OF COMMUNICATION refer to the six styles which people use when communicating: 1) small talk, 2) light control talk, 3) heavy-active control talk, 4) heavy-passive control talk, 5) search talk, and 6) straight talk.

10. FLEXIBILITY IN USING STYLES refers to being able to use any of the "styles of communicating" when it is appropriate.

11. MIXING MESSAGES refers to you or other people overlapping control talk with any of the other three styles.

12. MAPPING AN ISSUE refers to following the six steps (1. identifying the issue, 2) contracting to work through an issue, 3) understanding the issue, 4) identifying intentions, 5) generating solutions and taking action, and 6) evaluating the outcome) when working through an individual or group issue.

13. CONTRACTING TO WORK THROUGH AN ISSUE refers to step #2 of "mapping an issue," yet more specifically to 1) selecting a clearly defined issue, 2) determining individual committments to resolving the issue, and 3) deciding on who will meet when, where, and for what before moving on to step #3.

14. TROUBLE SHOOTING refers to first doing three things; 1) stepping outside the conversation, 2) facing the fears of vulnerability and of consequences, and 3) examining intentions; then, using the 4) trouble-shooting checklist which checks both how you used the "mapping" procedures and your use of other communication skills

15. BUILDING SELF AND OTHER ESTEEM refers to using the "I count/I count you" framework to become aware of your counting behavior toward self and others, then, making changes if needed to show prizing of yourself and of others.

QUESTIONS:

1. How well do you understand the basic idea of this ITEM?
2. How much have you used this ITEM since the last session of Working Together?
3. How effectively did you use this ITEM when you did?
4. How much have you noticed others with whom you work using this ITEM since the last session?

1	2	3	4

SAMPLE:

not at all			to some extent			to a great extent
	1	2	3	4	5	6	7
never			sometimes			almost always

STATING INTENTIONS refers to making statements from the "intention" part of your Awareness Wheel.

ITEMS: (On the back side of the instruction sheet you will find a glossary for all of these ITEMS.)

1. SPEAKING FOR SELF
2. USING YOUR AWARENESS WHEEL
3. DOCUMENTING INTERPRETATIONS
4. OBSERVING AND LISTENING
5. ACKNOWLEDGING
6. INVITING
7. CHECKING OUT
8. SHARED MEANING PROCESS
9. STYLES OF COMMUNICATION
10. FLEXIBILITY IN USING STYLES
11. MIXING MESSAGES
12. MAPPING AN ISSUE
13. CONTRACTING TO WORK THROUGH AN ISSUE
14. TROUBLE SHOOTING
15. BUILDING SELF AND OTHER ESTEEM

Appendix C

Results and Discussion of Data Pooling Procedures

Data Pooling

The WORKING TOGETHER (WT) workshop was presented three times in 1981 for non-faculty staff at the University of Kansas. In July, 17 staff attended, 11 came in September, and nine in October. Of these 37 participants, only 17, or 46% completed all 12 survey questionnaires and became subjects in this study. There were only three subjects from July, eight from September, and six from October. Due to the small size of each of these groups, it was decided to pool their data if possible.

First, the three subjects from July were arbitrarily assigned to each of the other two groups based on the assumption that randomly assigning these three, subjects who were believed to have no significant differences from the others, would not unduely weight data from either one of the other groups. This step created one group of 10 subjects and one of seven.

In the next step, Mann-Whitney U tests were used to find significant ($p<.05$) differences between rating means from the two groups created in step one. This was done for all 255 dependent variables. Differences were found in only 17 cases each of which would have to be excluded from the analysis of data for pooled subjects, unless some demographic factor could explain the differences.

Spearman rho tests were done to find any correlations of demographic and dependent variables. Of the 17 cases of significant

differences between workshop group means, 14 correlated with at least one demographic variable. Analysis of these correlations suggested that the difference between means could be attributed to the demographic factors since the compositional differences between the workshop groups corresponded to the differences in rating means (see Appendix D). The differences, correlations, and analysis are presented next.

Subjects' "remembered ability," "anticipated ability," and "planned use" of "speaking for self" differed significantly (p=.0129, p=.0265, p=.0321, respectively) between groups. The September group's mean ranks were 11.40 for "remembered ability," 11.15 for "anticipated ability," and 10.05 for "planned use" compared to 5.57, 5.93, and 6.07 for the October group. Subjects who come into contact with more familiar people at work remembered greater ability with "speaking for self" (rho=-.5203) than did those who usually have contact with new acquaintences. Also, subjects who spend 10% or less of their work time with people not in their work group anticipated greater ability with (rho=-.4832) and planned more use of (rho=-.4851) "speaking for self" than did those who spend more than 10% of their time this way. The September workshop contained more workers who usually had familiar contacts at work (90%) and more who spend 10% or less time with people not in their work group (60%) than the October one did (57% and 43%, respectively) and that accounts for the difference in mean ratings.

In their ratings six weeks after the workshop ended, subjects' "understanding" of "speaking for self" differed significantly (p=.0397) between groups but not at any earlier measurement for this research

question. The comparative mean ranks of each workshop group were 7.20 for September and 11.57 for October. Subjects who are more self directed in their work understood this element better at this measurement time than did those who are more directed by someone else (rho=-.5036). The October workshop included a larger proportion of self directed workers (57%) than the September one did (30%) and that accounts for the higher rating mean.

Subjects' "understanding" of "documenting interpretations" differed significantly (p=.0154) between groups at the end of the introductory session for this skill but at no later measurement for this research question. No demographic characteristic was statistically associated with this difference, and without a demographic explanation this data could not be pooled.

Rating the same content element six weeks after the workshop ended, subjects' "anticipated ability" and "planned use" of "documenting interpretations" differed significantly (p=.0362 and p=.0065, respectively) between groups. The September group's mean ranks were 11.05 for "anticipated ability" and 11.70 for "planned use" compared to 6.07 and 5.14 in the October group. Subjects who had been in their current job more than 10 years anticipated greater ability with "documenting interpretations" than did those who had been in their job 10 years or less (rho=.5458). Also, subjects who spend 10% or less of their work time with people not in their work unit planned more use of (rho=-.4950) "speaking for self" than did those who spend more than 10% of their time this way. The September workshop included a larger proportion of workers who had had their current job more than 10 years

(50%) and more workers who spend less than 10% of their work time with people outside their work unit (60%) than the October one did (0% and 43%, respectively). These facts account for the higher rating means.

Subjects' "observations of others' use" of "acknowledging" was significantly (p=.0088) different between workshop groups at the end of the introductory session for this skill but not at any other measurement time for this question. The comparative mean ranks for the two groups were 6.40 in September and 12.71 in October. Subjects who have only one supervisor observed others' using this element more (rho=-.5423) than did those who have two or more supervisors. The October workshop included more workers with only one supervisor (70%) than the September one did (60%), so this factor explains the difference in mean ratings.

When rating the "styles of communication" a few days after the workshop was completed, subjects' "use" of this skill differed significantly (p=.0101) between workshop groups but not at any other measurement time for this question. The September group's mean rank was 11.35 compared to 5.64 for the October group. Subjects who have been in their current job more than 10 years used the "styles of communication" more (rho=.5339) than did those who have had their job 10 years or less. The September workshop included more workers who had had their job over ten years (50%) than the October one did (0%) and that accounts for the difference in mean ratings.

Subjects' "observations of others' use" of "mixing messages" differed significantly (p=.0373) between groups a few days after the

workshop was completed but at no other measurement for this research question. No demographic characteristic was statistically associated with this difference, and without a demographic explanation this data could not be pooled.

Subjects' "effectiveness" when using "contracting to work through an issue" differed significantly between workshop groups twice in the series of three ratings for this question. At the end of the introductory session for this skill, the September group's mean rank was 11.30 which differed significantly (p=.0161) from the October group's 5.71, and three demographic factors correlated with this dependent variable. Subjects who have been in their current job more than 10 years were more effective when they used "contracting to work through an issue" (rho=.5534) than were those who have had their job 10 years or less. Also, subjects who spend 10% or less of their work time with people not in their work unit were more effective when they used this skill (rho=-.6785) than were those who spend more than 10% of their time this way. Furthermore, subjects who enjoy dealing with people at work less than other parts of their job were more effective when they used this skill (rho=.5546) than were those who enjoy people more. Compared to the October workshop group, the September one included more workers who had been in their job over 10 years (50% vs. 0%), more who spend 10% or less of their time with people outside their work group (60% vs. 43%), and more who enjoy dealing with people less than other parts of their job (30% vs. 14%). Group composition can account for the different rating means.

Again, six weeks after the workshop ended, subjects'

"effectiveness" when using "contracting to work through an issue" differed significantly (p=.0255) between workshop groups but not at a few days after the completion of the workshop. The comparative mean ranks were 11.25 in September and 5.79 in October. No demographic characteristic was statistically associated with this difference, and without a demographic explanation this data could not be pooled.

Subjects' "use" and "effectiveness" when using "trouble shooting" differed significantly (p=.0258 and p=.0427, respectively) between workshop groups at the end of the introductory session for this skill and a few days after the workshop ended, but not six weeks later. At both measurement times, the September workshop group's mean ranks were 11.25 for "use" and 11.05 for "effectiveness" compared to 5.79 and 6.07 for the October group. Just following the introduction of "trouble shooting," two demographic factors correlated with the dependent variable and another one did a few days after the workshop was completed. Subjects who are more directed by others in their work used this skill more effectively (rho=.6097) than did those who are more self directed. Also, subjects who rarely feel free to speak their mind at work used this skill more (rho=-.5481) and more effectively (rho=-.5364) than did those who almost always feel free to do so. Compared to the October workshop group, the September one included more subjects who are more directed by others in their work (70% vs. 43%) and more rarely feel free to speak their mind at work (30% vs. 14%). Group composition can account for the different rating means.

In their ratings six weeks after the workshop ended, subjects' "observations of others' use" of "building self and other esteem"

differed significantly (p=.0257) between workshop groups but not at any earlier measurement for this research question. The comparative mean ranks of each workshop group were 11.20 for September and 5.86 for October. Subjects who are more directed by others in their work understood this skill better at this measurement time than did those who are more self directed (rho=.6097). The September workshop included a larger proportion of other directed workers (70%) than the October one did (43%) and that accounts for the higher rating mean.

The results of the data pooling procedure show that all but three differences in the mean ranks between workshop groups can be attributed to the composition of each group based on a number of demographic factors. The three differences that remain unexplained must be considered exceptions and the data from the two groups may not be pooled for these dependent variables.

Appendix D

The Research Sample

The Survey Population

The subjects in this study were all University of Kansas employees including only non-faculty staff most of whom did not work directly together. This group represented a wide range of ages and both sexes equally. Most of them were supervisors. All had attended a supervisory skills workshop within two years prior to WORKING TOGETHER (WT) and most had requested at that time to have a workshop dealing spcifically with interpersonal communication skills. None had had previous exposure to any workshops or publications by the WT authors. All attended one of three WT workshops presented through the cooperation of the KU Personnel Training Office in 1981.

Attendance at these three workshops was 17 in July, 11 in September, and nine in October. Actual subjects comprised only 46%, or 17 of the 37 participants in all three workshops. These 17 were asked for information covering their experience with communication training and motivation in attending WT, in addition to the kinds of information that were used in the analysis to help understand why subjects may have rated the dependent variables as they did.

Only 6 of the 17 subjects (35%) reported having had previous communication training (question #8) and five of them had been in a workshop within the prior year. However, none of the subjects had been exposed to the ideas as they are presented in WT (#9). Most of the survey subjects had been eager to attend WT and had asked to come rather than having been asked or ordered to do so (#7 & #23).

(#7) Did you ask to come to WT? (yes=14 no=3) Were you asked or told to come to this workshop? (yes=3 no=14)

(#8) Have you attended other communication workshops or clases? (yes=6 no=11) If so, how many? (one=6 none=11) Was the last one within the last six months? (yes=1 no=5) within the last year? (yes=5 no=1)

(#9) Have you ever attended a COUPLES COMMUNICATION workshop? (no=17) Have you ever read either ALIVE AND AWARE, TALKING TOGETHER, OR STRAIGHT TALK (all books by the same authors as WT)? (no=17)

(#23) Did you come to the WT workshop eagerly (yes=15) or reluctantly (yes=2)?

Two questions on the demographic questionnaire, #2 and #4, were included only to help clarify subjects' answers on the question that preceeds each. A third, #17 did not distinguish subgroups, i.e., dealing with people at work was "very important" to the success of all subjects. None of these questions mentioned so far (numbers 2, 4, 7, 8, 9, 17, and 23) were included in the analysis of dependent variables.

There were 19 demographic characteristics whose influence was analyzed and included in the interpretation of dependent variables. The remainder of this appendix is used to organize these characteristics into just three categories. A description of the information in each category is followed by a list of how subjects were distributed on each characteristic.* For the sake of the discussion in Appendix C, this

------(Footnote)

*Both ranked and scalar responses to demographic questions have been divided into subgroups. The ranked ones were arbitrarily assigned to two subgroups per characteristic and the scalar ones were each divided into two subgroups by randomly assigning the middle response (4) to either the low (1-3) or the high (5-7) range of the rating scale.

distribution is subdivided to report what portion of each demographic subgroup was from the September workshop (S) or the October one (O).

These demographic characteristics are identified in two ways. They are listed first by the letter assigned to them for data analysis, and then by the number assigned to each on the questionnaire. Hence, each one can be cross referenced to both the questestionnaire in Appendix B and the analysis of data in Chapters Three and Four.

In the first category of demographic characteristics, subjects were asked about their job longevity.

A. (#1) 12 subjects had been in their present job ten years or less (S: 5; O: 7); compared to 5 who had been there more than ten years (S: 5; O: 0).

In the second, subjects were asked about how they spent their work time and the people with whom they work. This information was expected to provide a picture of how they might be using the workshop skills. The questions dealt with the number of each subject's superiors, peer-level coworkers, and subordinates. They also asked what proportion of subjects' work time was spent either alone, with coworkers, or with strangers (people in other work units, the public, etc.).

B. (#3) 13 subjects were the main supervisor for ten or fewer subordinates (S: 8; O: 5); compared to 4 who supervised more than ten (S: 2; O: 2).

C. (#5) 11 subjects had only one supervisor (S: 6; O: 5); compared to 6 who had two or more (S: 4; O: 2).

D. (#6) 9 subjects worked with fifteen or fewer peer level coworkers (S: 5; O: 4); compared to 8 who worked with more than fifteen (S: 5; O: 3).

E. (#10) 5 subjects spent more of their work time alone (S: 3; O: 2); compared to 12 who spent more with other people (S: 7; O: 5).

F. (#11) 9 subjects spent 10% or less of their work time with subordinates (S: 6; O: 3); compared to 8 who spent more than 10% with this group (S: 4; O: 4).

G. (#11) 8 subjects spent 10% or less of their work time with superiors (S: 3; O: 5); compared to 9 who spent more than 10% with this group (S: 7; O: 2).

H. (#11) 10 subjects spent 25% or less of their work time with peer-level coworkers (S: 6; O: 4); compared to 7 who spent more than 25% with this group (S: 4; O: 3).

I. (#11) 9 subjects spent 10% or less of their work time with people not in their work unit (S: 6; O:3); compared to 8 who spent more than 10% with this group (S: 4; O: 4).

In the third category, subjects were asked about their communication style and human relations attitudes at work. Two of these questions dealt with whether they felt free to speak their mind and if they were usually at ease in talking through work related problems. Subjects were also questioned about how much they enjoy dealing with people at work and how satisfied they were with how effectively they did. Other questions in this category explored subjects' preferences for planning their work or not and looked at how much structure was in the work assignments they received and in those they gave to subordinates. Finally, they were asked how much they decide for themselves what they do at work compared to how much is decided by someone else.

J. (#12) 7 subjects tended to be self directed in their work (S: 3; O: 4); compared to 10 who were directed by someone else (S: 7; O: 3).

K. (#13) 6 subjects tended to be directive with subordinates (S: 3; O: 3); compared to 9 who were laissez-faire (S: 4; O: 5).

L. (#14) 10 subjects tended to receive highly structured work assignments from their supervisors (S: 6; O: 4); compared to 7 who got unstructured ones (S: 4; O: 3).

M. (#15) 11 subjects tended to give highly structured assignments to subordinates (S: 5; O: 6); compared to 4 who gave them unstructured ones (S: 3; O: 1).

N. (#16) 5 subjects tended to talk through problems at work with difficulty (S: 3; O: 2); compared to 12 who found doing so easy (S: 7; O: 5).

O. (#18) 4 subjects tended to rarely feel free to speak their mind at work (S: 3; O: 1); compared to 13 who could almost always do so (S: 7; O: 6).

P. (#19) 14 subjects tended to enjoy more dealing with people more than other aspects of their job (S: 8; O: 6); compared to 3 who enjoyed people less (S: 2; O: 1).

Q. (#20) 13 subjects came into contact more often with familiar people at work (S: 9; O: 4); compared to 4 who mostly contacted new acquaintences (S: 1; O: 3).

R. (#21) 6 subjects tended to be dissatisfied with their human relations effectiveness at work (S: 4; O: 2); compared to 11 who were very satisfied with them (S: 6; O: 5).

S. (#22) 14 subjects preferred to plan out their work (S: 8; O: 6); compared to 3 who preferred more spontaneity (S: 2; O: 1).

Appendix E

Intercorrelation of Demographic Factors

Intercorrelation of Demographic Factors

In this study, demographic information is used to explain why subjects gave the responses they did. It is assumed for the sake of discussion that each demographic characteristic is a discrete factor. In fact, they are not. While some characteristics do not correlate with any other one, 14 do. Spearman rho tests were used to compare all the demographic characteristics with each other. The resulting 14 significant ($p<.05$) correlations are stated below with reference numbers that identify them with the demographic questions (DQ) in Appendix B and the sample characteristics in Appendix D. These correlations are of little consequence in this study except to show that the demographic factors were not all discrete. Still, this information will not confound any conclusions drawn in Chapter Four.

The more work time subjects spend alone (DQ #10): 1) the less time they spend with subordinates (DQ #11) (rho=.6177); 2) the less often they feel free to speak their mind at work (DQ #18) (rho=.7195); 3) the more time they spend with peer-level coworkers (DQ #11) (rho=-.6844); and 4) the more they enjoy dealing with people compared to other aspects of their jobs (DQ #19) (rho=.5339).

The more work time subjects spend with subordinates (DQ #11): 1) the more subordinates they have (DQ #3) (rho=.5577); 2) the less time they spend with superiors (DQ #11) (rho=-.5359); and 3) the less time they spend with peer-level coworkers (DQ #11) (rho=-.6004).

The more work time subjects spend with peer-level coworkers (DQ #11): 1) the more supervisors they have (DQ #5) (rho=.5178); 2) the

more satisfied they were with their human relations at work (DQ #21) (rho=.5008); 3) the more they prefer to plan ahead in their work (DQ #22) (rho=-.5151); and 4) the less often they feel free to speak their mind at work (DQ #18) (rho=-.6408).

The less directive subjects are with their subordinates (DQ #13) the more they give subordinates unstructured assignments (DQ #15) (rho=.7355). Also, the more peer-level coworkers subjects have (DQ #6) the more they prefer to respond-on-the-spot in their work (DQ #22) (rho=.4977). Finally, the more self-directing subjects are in their work (DQ #12) the less often they feel free to speak their mind (DQ #18) (rho=-.5766).