AD-A059 602 NAVAL POSTGRADUATE SCHOOL MONTEREY CALIF F/G 5/9
EVALUATION OF PROGRAMMED TEAM DEVELOPMENT PACKAGE FOR NAVY USAG--ETC(U)
JUN 78 B Y WINSTED

UNCLASSIFIED

1 OF 2
AD
A059 602

LEVEL II

(2)

NAVAL POSTGRADUATE SCHOOL

Monterey, California

THESIS

(6)

EVALUATION OF PROGRAMMED TEAM DEVELOPMENT PACKAGE FOR NAVY USAGE

BY

(10) Bradley Yancey Winsted

(11) June 1978 (12) 137p.

(9) Master's thesis,

Thesis Advisor: C. B. Gustafson

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER	2. GOVT ACCESSION NO.	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) Evaluation of Programmed Team Development Package for Navy Usage		5. TYPE OF REPORT & PERIOD COVERED Master's Thesis June 1978 6. PERFORMING ORG. REPORT NUMBER
7. AUTHOR(s) Bradley Yancey Winsted		8. CONTRACT OR GRANT NUMBER(s)
9. PERFORMING ORGANIZATION NAME AND ADDRESS Naval Postgraduate School Monterey, California 93940		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
11. CONTROLLING OFFICE NAME AND ADDRESS Naval Postgraduate School Monterey, California 93940		12. REPORT DATE June 1978 13. NUMBER OF PAGES 136
14. MONITORING AGENCY NAME & ADDRESS(if different from Controlling Office) Naval Postgraduate School Monterey, California 93940		15. SECURITY CLASS. (of this report) UNCLASSIFIED 15a. DECLASSIFICATION/DOWNGRADING SCHEDULE

16. DISTRIBUTION STATEMENT (of this Report)

Approved for public release; distribution unlimited

17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)

18. SUPPLEMENTARY NOTES

19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

Management Teams	Leadership
Team Training	Team Development
Programmed Studies	Team Analysis

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

A study was performed on the applicability of Task Oriented Team Development (TOTD), a team development programmed workshop training model, for Navy use. All Navy commands are made up of teams of individuals working interdependently for common organizational goals. TOTD is a set of programmed training materials designed to enable work teams at any level of the organization improve their ability to work together. Navy and Coast Guard Units were given TOTD in its present form. Time-one and time-two

DD FORM 1 JAN 73 1473 (Page 1)

EDITION OF 1 NOV 65 IS OBSOLETE
S/N 0102-014-6601

UNCLASSIFIED

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

Item 20 (continued)

measurement instruments were used with control groups. TOTD was found to be theoretically sound with current team development methodologies, however, it does not lend itself directly to Navy usage in its present form. The results of the study indicate that TOTD needs major modifications for Navy usage. The advantages of its programmed, modular nature, plus the minimum need of consultant or facilitator time make it worth Navy procurement with design changes incorporated. Suggestions for changes are listed in the appendixes of the thesis.

Approved for public release; distribution unlimited.

Evaluation of Programmed Team Development Package for Navy Usage

by

Bradley Yancey Winsted
Lieutenant, United States Navy
B.A., University of Colorado, 1971

Submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN MANAGEMENT

from the

NAVAL POSTGRADUATE SCHOOL
June 1978

Author Bradley Y. Winsted

Approved by Charles B. [illegible]
Thesis Advisor

Edwin V. Alden
Second Reader

[illegible]
Chairman, Department of Administrative Sciences

[illegible]
Dean of Information and Policy Sciences

ABSTRACT

A study was performed on the applicability of Task Oriented Team Development (TOTD), a team development programmed workshop training model, for Navy use. All Navy commands are made up of teams of individuals working interdependently for common organizational goals. TOTD is a set of programmed training materials designed to enable work teams at any level of the organization improve their ability to work together. Navy and Coast Guard units were given TOTD in its present form. Time-one and time-two measurement instruments were used with control groups. TOTD was found to be theoretically sound with current team development methodologies, however, it does not lend itself directly to Navy usage in its present form. The results of the study indicate that TOTD needs major modifications for Navy usage. The advantages of its programmed, modular nature, plus the minimum need of consultant or facilitator time make it worth Navy procurement with design changes incorporated. Suggestions for changes are listed in the appendixes of the thesis.

TABLE OF CONTENTS

ACKNOWLEDGEMENTS

This study to evaluate Task Oriented Team Development (TOTD) could not have been completed without the assistance, advice, and cooperation of the following personnel and organizations: CDR C. B. Gustafson who guided the author through each step during the project; HRMCs Norfolk, San Diego, and Pearl Harbor that provided the necessary personnel, time and resources to evaluate TOTD in the fleet.

I. INTRODUCTION AND BACKGROUND

A. INTRODUCTION

In 1971 the Navy responded to the combined impacts of accelerating social and technological change by adopting Organization Development on a system-wide basis through a Human Resources Management System [Forbes, 1976]. The Navy's developmental program was also a response to a decade of legislative and Department of Defense directives requiring the Navy to take dramatic new initiatives in the management of its human resources [Shear, 1975].

A Human Goals Plan in 1973 set up a reorganization of all Human Resources initiatives in the fleet and shore stations under Human Resources Management Centers (HRMCs). Some of the major outcomes of the Human Goals plan were to: (1) improve unit readiness; (2) improve communications at all levels of the command; (3) improve leadership and Human Resource Management practices at all levels of the command; and (4) improve career and job satisfaction [Weisner, 1973]. A "Human Resource Management Cycle" was set up so that by 1974 fleet units were scheduled for mandatory, organizational improvement training programs administered by Human Resources Management Centers and Detachments (HRMC, Ds) [Shear, 1975]. Such training is currently being carried out.

During the training cycle that Navy units go through, various forms of team development or training is conducted

by HRMSs. Most authors in the field of Organization Development agree that working groups and teams are the basic building blocks of organization effectiveness [Lickert, 1961]. Hence, almost all organization wide planned change efforts have as one of their primary targets of evaluation and change, the improvement of team effectiveness [Beckhard, 1969]. The small group or team, therefore, is often the entry point for Organization Development strategies [French and Bell, 1973; Varney, 1977]. Interdependent, coordinated team performance is a predominant characteristic of most operational activities in the Navy [Wagner, 1976].

Task Oriented Team Development (TOTD) is a set of written programmed modules that develop certain team-building skills, TOTD was administered to five Navy and Coast Guard Units to examine the training effectiveness and benefits that such a program could offer. This study will report on the results of the testing evaluation.

B. DEFINITIONS

1. Groups And Teams

It is often difficult to determine the cutting point between a collection of individuals, a small group, and ultimately a team [Hare, 1976]. A clear conceptual delineation of each, however, is necessary in order to study team development [Wagner, Hibbits, Rosenblatt, and Schulz, 1976]. Interaction must take place for a collection of individuals to move toward a group. Four features of group life emerge as

individuals form into a group: (1) the members share some common goals, (2) they develop a set of norms, which are the boundaries within their interpersonal relations, (3) as interaction continues a set of roles become stabilized, and (4) a network of likes and dislikes of members toward one another develops [Sherif, 1954].

Teams on the other hand need to be defined more succinctly to allow closer study. The distinction between teams and small groups as described by Glaser, Klaus, and Egerman [1962] have the following characteristics:

1. Teams are relatively rigid in structure, organization, and communication pattern.
2. The task of each team member is well defined.
3. The functioning of the team depends upon the coordinated participation of all or several individuals.

In contrast, "small groups" differ in that they generally:

1. Have an indefinite or loose structure, organization, and communication pattern.
2. Have assignments which are assumed in the course of group interaction rather than designated beforehand.
3. Have group products that can be a function of one or more of the group members involved depending upon the quality and quantity of their participation.

The above definitions will be used as a guide throughout this study. Instructional strategies and programs should, therefore, take into consideration the characteristics and dimensions cited above.

2. Team Training

Team training can be described as:

The training of two or more individuals who are associated together in work or activity. The

> team is relatively rigid in structure and communication pattern. It is goal or mission oriented with the task of each member, well-defined. The functioning of team depends upon the coordinated participation of all or several individuals. The focus of team training and feedback is on team skills (e.g. coordination), activities, and products [Wagner, Hibbitts, Rosenbatt, and Schulz, 1976].

The key points of the definition are the interrelated and interdependent aspects of team development where coordinated action is required. If a team exists where such a function is not required then team training is inappropriate [Rubin, Plovnik, and Fry, 1975; Dyer, 1976].

C. MAJOR COMPONENTS OR CHARACTERISTICS OF TEAMS

1. Norms

One of the most general principles of psychology is that the behavior of an individual can be shaped effectively by someone who is in control of the rewards which are valued by a group member. When taken in a group sense the process becomes one of regulation of member's behaviors by certain behavioral norms that are created and enforced by group members [Hackman, 1976].

The major characteristics of group norms as outlined by J. R. Hackman [1976] are:

> 1. Norms are structural characteristics of groups (teams) which summarize and simplify group influence processes.
> 2. Norms apply only to behavior-not to private thoughts and feelings.
> 3. Norms generally are developed only for behaviors which are viewed as important by most group (team) members.

4. Norms usually develop gradually, but the process can be shortcutted if members want.
5. Not all norms apply to everyone.

Group members tend to form and conform to certain behavioral norms. Given a set of goals, norms define the kind of behavior which are expected of group members [Hare, 1976].

The Navy has certainly developed expected patterns of behavior and traditions that govern much of the activities that teams are involved in. Expectations on how individuals act towards seniors and juniors govern much of one's individual activities.

Morris Janowitz in his book, The Professional Soldier, points out that the Navy is the most conservative of the services. Janowitz remarks that the military has stood for the perpetuation of "extensive ritualism and to outbursts of organizational rigidity which remain baffling to the civilian outsider, anachronistic survivals are practiced alongside highly effective procedures of military management" [Janowitz, 1971]. To be extremely conscious of Navy norms is a must in developing a Navy team training model.

2. Roles

As teams grow in size and complexity, individuals tend to specialize in some aspect of the interaction process. The expectations for behavior in these specialties are represented by roles of the group members [Hare, 1976]. Organization members accomplish their work through roles; these roles are sets of behaviors for complicated tasks that are required in specialized activities [Graen, 1976].

Role-making systems are processes whereby the individual in the organizational structure: (a) acquires information about the content and demands placed on his behavior and the sources of those constraints and demands, (b) receives and sends communications regarding his actions in the role, (c) accepts a definite pattern of behavior, and (d) modifies this pattern over time [Graen, 1976].

The determinants that effect how, to what degree, when, and by whom the roles are influenced are: (a) physical technical systems, (b) the social system, and (c) personal (individual) systems [McGrath, 1976]. In a Navy environment the physical-technical system represents the constraints and demands that are accepted beliefs concerning roles. A certain engineering officer's role behavior on a submarine may rule out completely a subset of methods to perform that function because of Navy organizational practices. The social-cultural systems are the set of accepted methods of performing a function. A Navy set of social and cultural norms as discussed earlier determine a number of ways to respond in one's role as Officer of the Deck, for instance. The personal systems are imposed by the accepted beliefs that the individual holds; be it religious, selfish, neurotic, or open.

All members of the organization do not share the same beliefs regarding their role definitions as mentioned above. Several factors complicate the determination process: (a) ambiguity, (b) conflict, and (c) load. Acquiring

knowledge and expertise to lessen the ambiguous nature of the role may find the individual in a conflicting area where his role overlaps with another's role producing conflict. Also, when a situation overloads an individual, the person may respond in dysfunctional manners affecting the role-making process [Graen, 1976].

3. Group Development

In any team training exercise it is important to monitor and understand the development process that normally occurs in groups. Team building programs must be sensitive and responsive to the stage of maturity that the group is experiencing both in the interpersonal and the task function areas [Jones, 1973; Merry, Allerand, 1977]. Theories of team development can be applied to descriptive and predictive functions. Descriptively, the development theory can give leaders, participants, facilitators and observers a proper perception of what to expect under most conditions. The developmental theory can be used predictively to surmise future process, or what should happen and why [Banet, 1976].

In the mid-1950's Bennis and Shepard presented a detailed theory of group development basing their theory on training groups observed and Freudian psychology [Hare, 1976]. The core of their theory is that stumbling blocks to group development were the areas of dependence (how the participants will relate to authority) and interdependence (how they will work out the personal relations with their peers). The

development of the group was seen going through two phases, each with three subphases. In the first phase, the members are concerned with power and dependence. In the second phase the members are confronted with interdependence and their interpersonal relations [Bennis and Shepard, 1956]. Tuckman's summary of the literature of group development classifies four major stages in group development which are divided into two aspects of group structure almost identical to Bennis and Shepard's interpersonal relations and task behavior model. The distinction between task and social-emotional behavior is addressed by most group theorists [Bales, 1953; Tuckman, 1965; and Jones, 1973]. The four stages of task activity as set forth by Tuckman are "orientation and testing," "intra-group conflict," "development of group cohesion," and "functional role relatedness." The corresponding four development stages relating to process parallel to those of individual development that are found in a group are "dependence," "conflict," "affection," and "maturity" [Tuckman, 1965]. Although other theorists interchange the first two stages most literature appears to follow Tuckman's analysis [Slater, 1966; Schutz, 1967].

Talcott Parsons has further expanded group development theories by developing a functional analysis of group development [Parsons, 1961]. The approach is based on the fact that every social system must solve certain problems in order to survive. These problems described symbolically as "A-G-I-L" are:

1. Adaptation or "A" which describes the members of the group generating skills and resources necessary to reach the goal;
2. Goal attainment or "G" which describes the members of the group effectively reaching their common goal;
3. Integration or "I" which has the members developing rules which allow them to coordinate their activity and establish enough solidarity to complete the task; and
4. Pattern maintenance or "L" which has the members establishing a common identity and having some committment to the group [Hare, 1973].

The typical sequence of group development based on the "A-G-I-L" is "L-A-I-G." The group requires that its purpose be defined or "L", new skills are then acquired or "A", the group is organized so that members can try out these new skills or "I", and the group members then work on the task or "G". Finally, the terminal stage in which the group returns to "L" to redefine their relationships between the members and the group proceeds with other problems or is disbanded [Bennis and Shepard, 1956; Schutz, 1958; Tuckman, 1965; and Mann, 1967]. Task Oriented Team Development (TOTD) is structured along these lines with the team first defining their purpose of being, organizing themselves by defining their roles, learning new skills, and then working on the goals or task. At the end of the TOTD model the original goal is reexamined. Some groups if left to their own devices may never progress beyond the early stages without training [Hare, 1976].

For any team training program to be effective a model of group development must be studied and applied so that group transition from phase to phase of growth can be smooth. The

"equilibrium problem" between task and social-emotional issues must be addressed in team development so that the team will not be too absorbed in task, neglecting group structure and member satisfaction resulting in an eventual decline of productivity [Bales, 1953].

4. Leadership

Studies on organization effectiveness typically report that good leadership is a primary criterion for efficiency [Hare, 1976]. Four variables were reported in a review of research done on successful industrial groups and found that: (a) the supervisor's ability to play a differentiated role, (b) the degree of delegation of authority or closeness of supervision, (c) the quality of supportiveness by employees, and (d) the amount of group cohesiveness were all significant for team success [Kahn and Katz, 1953].

Almost all groups or teams in the Navy have clearly designated leaders usually being the senior person present. Leadership style is the way that a person consistently deals with subordinates. Different leadership styles may be imposed upon groups to create differences in interaction processes. Several authors have studied dichotomous leadership styles that leaders find themselves falling between. Styles such as "consideration" versus "social-emotional," "task-oriented" versus "social-emotional," "employee-centered" versus "job-centered," or "authoritarian" versus "democratic" have been studied as to their particular effectiveness

[Halpin and Winer, 1952; Fielder, 1967; Lickert, 1961; and Hare, 1957]. Blake and Mouton developed a characterizing leadership grid by comparing a manager's concern for people on one axis to their consideration for production on the other. A high concern for both people and task output would be characterized "team management" or the pinnacle of productive management [Blake and Mouton, 1964].

The Navy along with the other services have attempted for years to isolate the traits that distinquish poor leaders from effective ones. Janowitz [1960] declared in his book, The Professional Soldier, that:

> after forty years of research and development of military personnel selection practices, it is now abundantly clear that there is no satisfactory and reliable technique for locating personnel with leadership potentials.

The concept of a leader as a "personality characteristic" proved to be oversimplified and unverifiable [Vroom, 1976]. Since the leader usually influences and is held strictly accountable for the team's behavior in the Navy it would be useful to study what behaviors in which situations could maximize group output through leadership styles and skills.

A study completed by McBer and Company [1977] that the Navy is utilizing in its development of a new leadership and management training program identified competencies which were shown to differentiate "superior" from "average" Navy leaders and managers. Recent research had demonstrated that the amount of technical training alone without the cognitive, interpersonal, and motivational factors cannot

insure superior performance for leaders [Klemp, Munger, Spencer, 1977].

In the Navy-commissioned study the leadership and management competencies of a cross-section of commissioned and non-commissioned Naval personnel were studied. Analysis of hundreds of recorded incidents identified 27 leadership and management competencies grouped into five factors. Four of the five factors predicted superior leadership and management at statistical levels of significance. The four factors were: (a) "Task Achievement"--setting goals and coaching subordinates in developing job related skills; (b) "Skillful Use of Influence"--using persuasion, explanation, rewards for good performance, fostering teamwork, collaboration, rewarding team performance, voluntarily sharing information, and offering help; (c) "Management Control"--planning and organizing tasks, clearly directing subordinates, delegating work to others, monitoring the results of managerial actions, giving subordinates feedback on performance, and anticipating and planning for situational requirements reporting systematic methods for monitoring and controlling activities in their environment, and (d) "Advising and Counseling"--listening to and counseling subordinates with performance, disciplinary, personal, and career planning problems, believing more in their subordinates basic worth and ability to perform, mentioning positive expectations to inspire improved subordinate performance [Klemp, Munger, and Spencer, 1977].

The application of the McBer findings will be a leadership and management course set up for specific grades of officers and enlisted men and women. The proficiencies identified in the study could also be a part of any team building program. A team development program should emphasize these key competencies in order to develop the attributes that the McBer study found.

Authoritarian and democratic leadership styles are the two most common types of leadership styles that have been examined in experimental groups [Anderson, 1959]. In any situation the group will be more effective when the member's expectations about the behavior appropriate with that situation is met. Where members in the Navy expect to anticipate a more forceful leadership from their leaders, a more authoritarian form of leadership would produce more sought after outcomes [Hare, 1976]. In a study of 72 conferences in industry and government leadership sharing, a participative approach, was found to be negatively related to the attractiveness of the group and satisfaction because the groups expected a one-man, authoritarian conference style [Berkowitz, 1953]. If the leader strays too far from his expected role in the Navy the members could become confused and dissatisfied, affecting productivity. Janowitz [1971] stated:

> Because the military establishment is so difficult to manage, and requires so many competent leaders there is reason to believe that the introduction of enlightened policies may not necessarily produce commensurate positive results . . . . On the contrary, the new managerial techniques require long periods of training and very high

> levels of organizational loyalty . . . . Much confusion and tension exists in the military with officers of older traditions adjusting and readjusting to the requirements of an increasingly technological organization. The objective of the effective military manager is not to eliminate differences in rank and authority; instead he seeks to maximize participation in implementing decisions at all levels by taking into consideration the technical skills and interpersonal needs of all concerned.

To say a leader should always respond in one way to every situation would ignore most recent studies of leadership. Fiedler [1968, 1972] and his associates report a complicated relationship between the type of task and the variations of leadership style. They found that the performance of interacting groups is contingent on the leadership style interacting with the situational favorableness. The task-oriented leader was effective in favorable situations where the group accepts the leader or where the task is highly structured. The task-oriented leader is also effective in very unfavorable situations where a strong, controlling leadership is required [Fiedler, 1968, 1972]. There have been many theories on situational leadership. Participation in decision making like all of the leader's behaviors and traits, has consequences that vary from one situation to another [Vroom, 1976]. Navy leadership and policies are highly structured and the tasks clearly defined. Leadership styles must fit into a Navy framework in order for team training to be effective.

5. Tasks

The "task" of the team is normally thought of as the stated objective. All formal Navy teams will have a task that requires an organization to achieve its goal. The "task" can be described in six variables as outlined by Alexander Hare [1976]:

1. The kind of task (goal),
2. The criteria for task completion,
3. The rules (roles) which must be followed,
4. The method of imposing the rules (norms),
5. The amount of stress on the participants,
6. The consequences of failure or success.

The task is a general way of specifying the expected outcomes of group behavior. A solution to the task is difficult to obtain if the criterion for completion is ambiguous [Hare, 1976]. The most efficient groups are those where the roles match the task. Generally, cooperation results in greater individual motivation, division of labor, productive interpersonal communication, and overall group productivity [Deutsch, 1949, 1968]. The group norms will generally control and impose explicit and implicit rules [Hare, 1976]. When increasing stress is applied, groups first tend to lag, then overcompensate in energy, and finally if stress is maintained--collapse [Miller, 1955]. A mild stress usually results in higher productivity for the group [Lanzetta, 1955]. The consequences of success include a higher degree of discussion of the task than unsuccessful groups and a tendency to raise levels of aspiration for the next problem, while unsuccessful groups lowered their expectations [Berkowitz and Levy, 1956].

Alexander and Cooperband [1965] distinquished between two team training models based on the nature of the task being "established" or "emergent." "Established" situations were where the activities are specifiable, predictable, bounded by research and records, and having all alternatives planned out. "Emergent" situations are identifiable by action-relevant environmental conditions that have not been specified with predictions not available, and analytic solutions not available [Boguslaw and Porter, 1962].

In "emergent" situations tasks cannot be accomplished without coordination and cooperation between individuals. Training in team skills (e.g. coordination) is required when formal rules cannot be stated and procedures must be developed by the team. Most management teams find themselves in a more "emergent" environment than a completely structured one [Alexander and Cooperband, 1965].

> Learning to cooperate (to meet the task) means learning the strengths and weaknesses of one another, learning when the others want help and when they do not want it, learning to pace one's activities to fit the needs of all, and learning to behave so that one's actions are not ambiguous [Alexander and Cooperband, 1965].

6. Feedback

"Performance feedback is unquestioningly the single most critical parameter in team or individual training," concludes Kanarik [1971] in a review of research literature on feedback. Other studies of training groups have concluded the same thing [Klaus, 1968].

A common approach used to provide members with feedback is the post-exercise briefing. The time-gap difference between the response and feedback might be a factor that effects the impact on the participants' learning [Gagne, 1977].

Team members can receive feedback from intrinsic or extrinsic sources. Extrinsic feedback is given by a source external to the team like a facilitator. Intrinsic feedback is received while the team is performing its tasks and is inherent to the task itself. The effectiveness of intrinsic feedback has been shown in a number of studies [Hare, 1976].

Providing feedback in team training may present problems because of the individual training interface.

> In order for a team to operate effectively, it is necessary for its members to develop and maintain individual skills as well as skill in working together; there is a possibility that these skills may require different feedback procedures which may mutually interfere [Alexander and Cooperband, 1965].

Feedback from team members can serve two major functions for a group member. It can provide him with information about what behaviors are appropriate and inappropriate in fulfilling one's position on the team; and further it can provide reinforcement, rewarding "right" behaviors and punishing "wrong" ones. Research has shown that it is possible to change the role of a given group member by selectively reinforcing certain of his behaviors [Sarbin and Allen, 1968]. One study by Smith and Knight [1959] demonstrated how group generated feedback can facilitate role-learning by individual

members, and that the overall effectiveness of the group can be improved in the process. It was found in the study that such feedback increased the problem-solving efficiency and the level of self-insight of group members.

Robert Gagne [1977] stated, "the usefulness of frequent feedback during the acquisition of newly learned capabilities should not be overlooked . . . . The designers of programmed instruction frequently emphasize the importance of confirming the responses for each form of the program."

Any team training program then must have built into it feedback procedures that follow immediately after a given learning experience reinforcing knowledge learned or is intrinsically built into the segment of the learning package.

D. EFFECTIVE VERSUS INEFFECTIVE TEAMS

Three of the earlier writers in the area of management teams who are considered today to be leaders in management theory are Douglas McGregor, Rensis Lickert, and Chris Argyris. They discussed in their respective books what they considered to be a highly effective management team's characteristics. The characteristics are basically the same [McGregor, 1960; Lickert, 1961; and Argyris, 1970]. The critical question for the military would be if the characteristics proposed by these leaders in civilian management theory are appropriate for the Navy.

Below are listed 11 characteristics that McGregor [1960] found with effective management teams.

1. The "atmosphere" tends to be informal, comfortable and relaxed. It is a "working atmosphere" where people are involved and interested.
2. Discussion is open with participation by all members. If the discussion gets off the subject, someone will guide it back.
3. The task or objective of the group is well understood and accepted by the members. There is free discussion of the objective at some point until it was formulated so that members of the group can be committed to it.
4. The members listen to each other. The discussion tends not to jump from one unrelated idea to another. Every idea is given a hearing.
5. There is active disagreement. The group is comfortable with this and shows no signs of attempting to avoid conflict. The group seeks to resolve the conflict rather than dominate the dissenter.
6. Most decisions are reached by a kind of concensus in which it is clear that everybody is in general agreement and willing to go along. There is little tendency for persons who oppose the action to keep their criticisms private. Formal voting, therefore, is at a minimum.
7. Criticism is frequent, frank, and relatively comfortable. Criticism is done in a constructive manner without personal attack.
8. People are free in expressing their opinions on the problem at hand and on the group's operation. There are few "hidden agendas." Everybody appears to know how everybody else feels about any matter under discussion.
9. When action is taken clear assignments are made.
10. The leader of the group does not dominate it nor does the group defer unduly to him or her. The leadership might even shift from time to time depending on the problem at hand and the individual resources needed. There is little evidence for a struggle for power as the group operates. The issue is not who controls, but how to get the job done.
11. The group is self-conscious about its own operations. Frequently, it will stop to examine how well it is doing and what behaviors or issues are interfering with the accomplishment of the groups objectives.

Lickert's characteristics of an effective work group are very similar to McGregor's. Chris Argyris [1971] stated that the conditions which exist when a team is working effectively revolve around a high level of trust, a concern for members of the group, and the opportunity for persons to express their individuality. Glenn Varney [1977] supports McGregor's and Lickert's findings in the areas of mutual trust, communications, mutual support, and clear team goals.

The McBer study of superior Navy leaders mentioned many of the same characteristics listed above in the leader's actions with his subordinates. Skills such as fostering teamwork, collaboration, building group committment, voluntarily sharing information , offering help when needed, explaining actions openly, planning organized tasks with clear-cut goals, giving feedback at appropriate times, listening attentively to subordinates, and being approachable were found to be significantly more apparent with "superior" officers than "average" officers [Klemp, Munger and Spencer, 1977].

It must be recognized in the above appraisals of effective groups that McGregor, Lickert, Argyris and Varney were dealing with management groups in higher level positions in predominantly civilian institutions. As Alexander and Cooperband [1965] stressed in their definition of "emergent" situations in which most management teams find themselves tending towards, a team must be able to respond to an environment with changing, unstructured conditions that demand cooperation

of group members. "Established" situations have tasks that are almost completely specified with rigid rules working well, therefore, allowing authoritarian doctrines to work well. In decision-making teams where policies and problems are changing daily even within the bounds of the Navy a cooperative, participative team is more effective than one dominated by only competition and dogmatic responses to management issues [Deutsch, 1949].

Participative practices in groups can increase the amount and accuracy of information members have about work practices and the environment associated with them. Participation can further increase the degree to which group members feel they "own" their work practices [Lawler and Hackman, 1964]. Therefore, although participative management has not been universally successful in increasing productivity, it is effective when: (a) the topic of participation is relevant to the work itself, (b) the objective task and environmental work setting must be supportive of more effective performance, and (c) the increased participative effort can lead to higher work effectiveness (not constrained by technology or environment) [Hackman, 1976].

In summary, from all the preceding definitions in this introduction, the most productive (effective) groups are those which carry out the major steps in the process of completing the task and social-emotional problems for the team and individual. To accomplish this the team must have a combination of member's personalities and skills, a

particular type of team structure, and a team problem-solving mechanism that is appropriate to the task. In an authoritarian setting which the Navy largely finds its teams within, the most productive group will tend to be more authoritarian. However, high productivity in the task area is not always associated with satisfactory relationships in the social-emotional area. In authoritarian groups and competitive groups, high productivity is often gained in the short run at the expense of member satisfaction (reflected in retention rates or unproductive task-stopping behavior). Teams also tend to be more productive when they are cohesive and small, have a communication network with maximum feedback, and have a skilled leader [Hare, 1976]. The "effectiveness" variables mentioned in this chapter must be addressed in any form of team training development program the Navy considers.

E. OTHER CONSIDERATIONS FOR TEAM DEVELOPMENT PROGRAMS

1. Purpose for Team Development

One of the clearest findings in small group literature is that group productivity will be improved if training is provided for the members, no matter what the task may be [Hare, 1976]. Team building or team development is probably the most advanced and frequently used of all Organization Development technologies used today [Hackman, 1976].

Lickert [1961] in his theory of group organization as a mosaic of overlapping and interacting teams, stressed a "linking pin" relationship between groups. The linking-pin concept is tied to Lickert's theory of groups where a person belongs to several groups within the organization. The subordinate in one team becomes a leader in another team. Team development is, consequently, the key to Lickert's development of an organization.

In a survey taken at an officer entry point school in the Navy, 46% of the newly commissioned surface officers were planning to make the Navy a career [Frazer, 1977]. By the end of their first tour the percentage had been drastically reduced to under 20%. The article accompanying the survey indicated that the young officers were not receiving the training skills they needed from their wardroom group of fellow officers, especially the department heads, executive officer, and commanding officer [Frazer, 1977]. Ships are made up of inter-connection or linking teams from the department head team, to the division officer and his chiefs. If one of the teams fails to pass on the information for its members to act productively, motivation to do a good job will deteriorate [Varney, 1977]. Therefore, probably the single-most important group of interventions an organization can experience are the team-building activities; the goals of which are the improvement and increased effectiveness of various teams within the organization [French and Bell, 1973].

2. When Team Development Should Take Place

Jay Galbraith [1973] states that team development is a viable alternative in redesigning organizations faced with work overload, decision-making difficulties, problems in lateral communication, or problems in information flow and scheduling.

John Lewis points out several basic assumptions two or more of which should be present if a team development program is to take place. Lewis [1975] states:

> 1. Current patterns of communication and interaction among members of a group are inadequate for group and organization needs.
> 2. The concept of being (or desiring to be) an integrated team exists in the minds of the executive and manager of the group.
> 3. Significant face to face interaction among members of the group is expected by the executive and/or is required by the needs of the organization.
> 4. The executive can and will behave differently as a result of the development effort, and team members can and will respond to his new behavior.
> 5. The organizational tasks assigned to the group require close and frequent coordination laterally among group members in such matters as planning, problem solving, and decision making.
> 6. The benefits in terms of group effectiveness and member satisfaction to be gained from team development outweigh the costs incurred from altering existing role and social network arrangements to which the group has accommodated.

Not all work units should experience team building. The indiscriminate use of team building can have disruptive effects on the organizations for whom it is inappropriate [Dyer, 1977]. William Dyer [1977] lists the following questions that should be asked prior to devoting the organization

to a team building effort. The questions Dyer asks are:

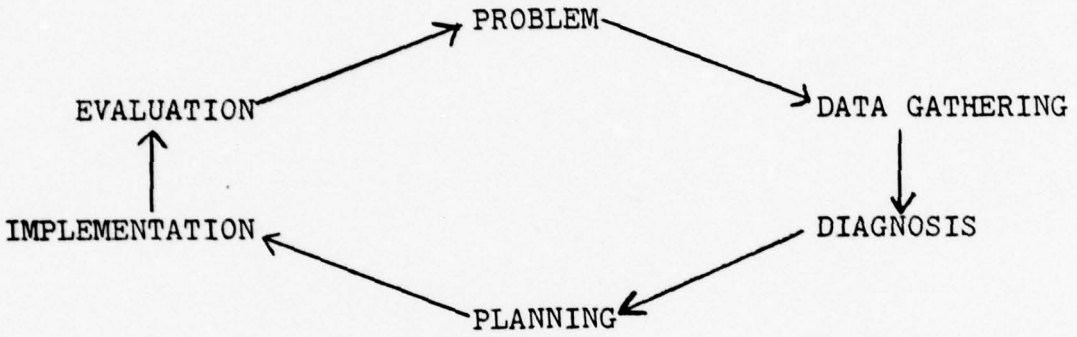
1. Is the manager (leader) familiar with and committed to the idea of team development? Does he know the long term nature of a team building program and is he willing to invest the necessary time, resources, and energy towards it?
2. Is there a true feeling of "hurt" or a need to see improvement or is the leader simply responding to pressure from an Organizational Development consultant or training department?
3. Is there enough time and availability of personnel to start such a program?
4. Are the managers (leaders) and others in the work team willing to look at their own performance and the work of the unit, willing to give and receive feedback, and honestly interested in making a change?

The above questions must be individually considered by the leader of the work group before he or she can seriously consider a team development program. In a Navy environment, there could be many instances where the personal philosophy of the leader could not accept the basic precepts of openness and collaboration. In other Navy scenarios it is very possible that enough time to devote to such a program is clearly impossible. These and other considerations and assumptions listed above must be carefully examined with the assistance of the Organization Development consultant before a team development program is undertaken.

F. CURRENT TEAM BUILDING PROGRAMS

1. Team Building Cycle

Normally a team development program will follow a cycle similar to the following diagram.



[Dyer, 1977]

The team-training program begins because someone recognizes a problem does exist. Data is gathered near the beginning of the cycle. The problem sensing process goes into the diagnosis stage and should always occur at the initial phase of the cycle to insure that the serious problems are identified [Merry and Allerhand, 1977]. The data-sharing process is often done publicly with the other group members, although this method is perhaps not as inclusive as a private interview, each person would feel responsible to "own up" to the information he or she presents. Participation in the process allows the members to feel they "own" the work practices and the likelihood that a norm of participation

framework of models there are four general forms, that are used individually or in a combination. The four models are: (a) the goal setting model, (b) the interpersonal model, (c) the role model, and (d) the managerial grid model [Beer, 1976].

The goal setting model strives for end results such as productivity, safety, profits, or operationally ready aircraft. The purpose of this team building exercise is to activate the group towards being more goal and action oriented [Beckhard, 1969]. The team meetings help the group learn how to participate in the goal setting process as a group.

The interpersonal model uses as an assumption that a team that is interpersonally competent showing mutual trust, supportiveness, and non-evaluative communication will be an effective team [Argyris, 1971]. As trust develops so does cooperative behavior and the group builds the cohesive and high committment to group goals enhancing team effectiveness and productivity [Hackman, 1976].

The role model uses the assumption that a group is a set of interdependent roles. As members better understand their role space, conflict and ambiguity are reduced and more energy is available for task relevant behavior [Bennis, 1966]. A role negotiations model by Roger Harrison [1973] is often used with the reality of power, coercion, and competitiveness not hidden. A fair negotiated settlement is achieved in writing between two people with conflicting roles. Harrison [1973] feels that such a method resolves many major conflicts

and support can begin early [Hackman, 1977]. The leader and consultant must work with the group to summarize the data and put it into a priority-listing. The problem solving and planning should proceed with the manager or leader conducting the meeting. Problem solving and action taking skills are used [Dyer, 1977]. If a consultant is present he or she will "process consult" or feedback to the group its problem solving and work process techniques [Schein, 1969].

The implementation and evaluation steps are a key to the success of the development process because they put to practice and adjust what was previously planned. There should be another data gathering process as a means of evaluation. It is important to determine if the actions planned during the development stages were achieved [Dyer, 1977]. The Dyer model follows closely the models of task that were discussed in section C-3 of this chapter.

2. Models

There are a multitude of team development models most including the main stages of the previously discussed cycle. All the team development programs involve varying degrees of group participation, self-examination, problem confrontation, and goal setting. The basic assumption underlying all the models is that the persons closest to the task situation can solve their own problems if a third party such as a facilitator or set of materials (programmed text) moves the group into confronting their problems. Within the broad

without having to get into feelings and emotions at a level lower than one must.

The managerial grid model uses a large amount of standardized instrumentation sometimes without the use of a facilitator with *in-house* expertise. The grid training identified where the group is now, "unfreezes" it and moves it to where their ideal situation would be. The recognition of disparity between the present state and desired state is the key towards leading the group to systematically plan and develop their ideal state of functioning. Blake and Mouton [1968] have designed a set of materials that assist the group to move towards a "9,9" culture where a pattern of management integrates concern for people and production (task) through participation. The common criticism of this model is the rigid, mandatory steps that every team must go through to achieve the desired end [Beer, 1976].

Team Development interventions rarely rely on one model. Roles would be difficult to discuss without getting into interpersonal issues, and goals cannot be studied without some conception of who does what (roles) and the ideal state sought [Beer, 1976]. An ideal team training program will combine some of all the models to develop an effective long-lasting, long-term team building effort. Task Oriented Team Development (TOTD) does just this.

3. Team Development Techniques

In the application of team building technologies many methods are usually employed. Some of the more recent have been the "Role Analysis Technique" (RAT), Roger Harrison's "Role Negotiation Model," the Nominal Group Technique (NGT), Victor Vroom's "Decision Making Model," Robert Mager's "Goal Analysis procedures," and the Force Field Analysis. At least one of these techniques are used in part or wholly in most recent team development programs.

Dayal and Thomas [1968] developed the Role Analysis Technique (RAT) as a way of examining role interdependence in newly formed organizations. Generally, the team discusses the purpose of each role, expectations that each role occupant has of others in his group, and the obligation of each role occupant to others. Many interpersonal and organizational issues surface in the discussion, and the authors feel it is a less threatening way to deal with interpersonal problems than is possible with the interpersonal team building model [Beer, 1976].

Roger Harrison's [1973] Role Negotiations Approach to team building has each team member list on a piece of paper, for each person in the group, those things which the other person should "do more of" and which things the person should "do less of," and those things which should "not be changed." Agreements are negotiated and contracted for in writing. Harrison feels that the approach resolves major conflicts without getting into feelings and emotions.

The Nominal Group Technique (NGT) was developed by A. L. Delbecq and A. H. Van de Ven in 1968. NGT is a structured group meeting which proceeds along a certain format. The normal size of the group is between seven and ten. The process of decision making in NGT is as follows:

1. Silent generation of ideas in writing.
2. Round-robin feedback from group members to record each idea in a terse phrase on a flip-chart.
3. Discussion of each recorded idea for clarification evaluation.
4. Individual voting on priority ideas with the group decision being mathematically derived through rank-ordering or rating [Delbecq, Van de Ven, Gustafson, 1975].

Thus, NGT overcomes several critical problems typical of interacting groups. The objectives of the process are:

1. To assure different processes for each phase of creativity.
2. To balance participation among members.
3. To incorporate mathematical voting techniques in the aggregation of group judgement [Delbecq, Van de Ven, Gustafson, 1975].

The NGT method of silent generation of ideas, followed by structured round-robin report out, and controlled clarification allows guaranteed maximum group participation along with "brainstorming" advantages in the initial stages where new ideas can be added on. Because of the rigidity of structure NGT conflict resolution's tend to be less personal and more task-related [Delbecq, Van de Ven, Gustafson, 1975].

Victor Vroom [1973] developed a normative model for decision making which points to various degrees of participation at different times in the decision-making process. The assumptions which guided the development of the model include:

1. The behavior of the leader of the group is specified unambiguously.
2. No single leadership method is applicable in all situations.
3. The best means of analysis of the situation is the particular problem to be solved and the context in which the problem occurs.
4. The leadership method used in one situation should not constrain the method or style used in others.
5. The leader has several choices of participation by subordinates in the decision-making process.
6. The applicable processes or leadership methods vary with the number of the leaders subordinates who are affected by the decision [Vroom, 1976].

The various styles of leadership decision processes or methods as elaborated by Vroom and Yetton [1973] are:

1. The leader solves the problem using information available at the time.
2. The leader obtains necessary information from subordinates, then solves the problem alone.
3. The leader shares the problem with relevant subordinates individually getting their ideas and suggestions without bringing them together as a group, then the leader makes the decision alone.
4. The leader shares the problem with all the subordinates as a group, collectively obtaining their ideas and suggestions. Then the leader makes the decision, which may or may not reflect the subordinates' influence.
5. The leader shares the problem with his or her subordinates as a group. Together the leader and subordinates generate and evaluate alternatives to reach an agreement. The leader's role is much like that of a chairman. The leader does not try to influence the group to adopt his decision, but is willing to accept and implement any solution which has the support of the entire group.

In the decision making process the leader asks a number of questions concerning the amount of information that he has to make a quality decision. If the decision was made by the leader alone, would it be accepted? Do the subordinates share in the organization's goals? Would cooperation between subordinates be likely in the preferred solution [Vroom and Yetton, 1973]?

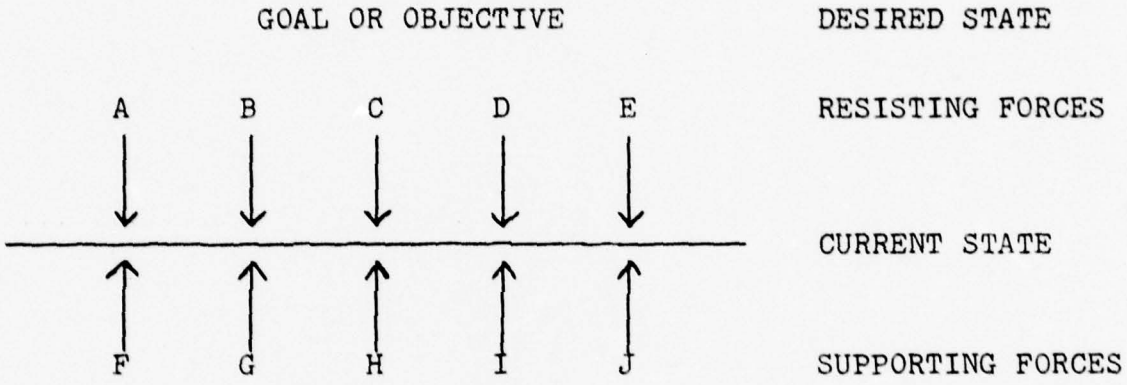
Vroom's model gives the leader many alternatives for decision-making methods in a variety of setting. It is a situational model that structures the leader's thoughts to examine the consequences of any decision-making model upon the organization.

Roger Mager [1972] has written much on educational techniques of helping to structure objectives and analyze goals clearly and meaningfully. In his book on goal analysis Mager develops a procedure in helping to find the meaning of the goals the team hopes to achieve and whether or not the goals deal with attitudes, appreciations, or understandings. Having identified a goal, Mager shows how to describe the performances that represent the meaning of the goal. The complete goal analysis procedure as outlined by Mager [1972] is made up of five steps.

1. Write down the goal.
2. Write in words and phrases, the performances that if achieved, would cause you to agree the goal is achieved.
3. Sort out the words and phrases. Delete the duplications and unwanted items. Repeat Steps 1 and 2 for any remaining abstractions considered important.
4. Write a complete statement for each performance, describing the nature, quality, or amount you will consider acceptable.
5. Test the statements with the question; If someone achieved or demonstrated each of these performances, would you be willing to say he or she has achieved the goal? When you can answer "yes", the analysis is finished.

This goal analysis procedure helps consolidate the broad goals of the organization to the point where their main performance are described in detail. It is a relatively simple way to discover what the goal really means.

The "force-field analysis" illustrates easily and simply the resisting forces and supporting forces of the implementation of a goal or objective. When the resisting and supporting forces are listed alternatives are discussed in reducing or lessening the resisting forces and increasing or supporting the positive forces that moves the team towards its goal.



Brainstorming suggestions in reducing the impact of the resisting forces is often used. A free flow of non-evaluated ideas are listed. As each of the proposals for action are studied and accepted or rejected, the participants by using the "force field analysis" can maintain an accurate whole picture of the situation [Merry and Allerhand, 1977].

There are many more techniques found in team management books and facilitator manuals that add or expand to the above techniques. The preceding five techniques were reviewed because they incorporate much of the inter-personal communication, and decision making processes that existing

team development are utilizing. A part of each of the techniques mentioned in this section is found in Task Oriented Team Development (TOTD).

4. Facilitator or Consultant Usage

The terms, facilitator or consultant, are used interchangeably in this thesis. Many organizational behaviorists and development writers place primary importance upon the expertise of the consultant's professional and interpersonal competence rather than the technologies alone [Beer, 1976; Argyris, 1971; Friedlander, 1968; and Dyer, 1977]. Throughout the team development meeting the consultant can play many roles. He is a process consultant assisting the group critique its own interactions. The consultant often acts as teacher, counselor, manager, resource person, promoter of group norms conducive to confronting and problem solving, and part time therapist [Argyris, 1971; Beer, 1976; and Bennis, 1965].

Argyris [1971] suggests that the consultant must possess self-awareness and a degree of self-confidence if the consultant is to take the large amount of risks involved in confronting clients with their own behavior and yet stay clear and neutral of the client's culture. Argyris warns that the possibility of the consultant's overbearing personality or dependence building can greatly reduce the effective impact of a team development program [Argyris, 1971].

Dyer [1977] states that the end result of the work of a consultant is to leave the manager capable of continuing team-development processes without the assistance of the consultant. Harvey [1975] points out that the effectiveness of an Organization Development effort can be inversely related to the number of consultants involved. Harvey stresses the theory that the client changes the organization and not the consultant, therefore the less consultant influence the better.

Beer [1976] concludes that the consultant is potentially the most important Organization Development technology available, yet Beer further explains that there is little systematic knowledge about individual attributes of an effective change agent (consultant).

Schein [1969] starts with the assumption that a process consultant (facilitator) is used to help the organization know how to use its own resources. The job of the process consultant is to help the organization to solve its own problems by making it aware of organizational processes. The ultimate concern Schein [1968] notes is the organization's capacity to do for itself using the skills and values the consultant gives it.

The passing on of skills void of consultant personality and dependence has consistently been a sensitive point for organization development consultants [Dyer, 1976; Plovnick, Rubin, and Fry, 1974].

There are approximately 400 "management specialists" assigned to Human Resource Management in the Navy. Most are products of a 12 week school which provides basic instruction in both Organization Development content and process consultation areas as well as specifics of the Navy program [Forbes, 1977]. The Navy's consultants have varying unspecified degrees of consultant competence as listed earlier in this chapter (counseling, teacher, norm maker, process consultant, etc.) and usually improve their skills during his or her three year tour as a Human Resources Management Specialists (HRMSs) [Forbes, 1977].

The Navy, today has approximately 2000 commands that are potential clients to the HRM program cycle. The current primary Organization Development technology used in the Navy program is the instrumented survey feedback method. The design of the actual intervention is tailored around individual unit needs although many of the workshops are structured and used repeatedly from intervention to intervention and sometimes several times within one command. Because of the large number of commands and the relatively few number of "qualified" consultant's the use of largely structured procedures is widespread and encouraged [Forbes, 1977]. Navy commands cannot afford to become consultant-dependent because of the short time span of a normal intervention cycle as well as the traditional command relationships found on most ships and aircraft squadrons where ultimate responsibility is always held by the Commanding Officer.

Programs that utilize a minimum of facilitator time both in the preparation phase and the implementation phase along with an ability to quickly transfer skills and information to a Navy command must be studied closely. With such structured experiences, a Navy command has the opportunity to conduct team training outside the normal Human Resources Management Cycle or Availability Period. Every year brings with it indications of fiscal budgetary cuts and close reviews of support programs such as HRM programs. Therefore, any potential team development model that utilizes a minimum of facilitator time in an easily presentable modular format deserves the closest scrutiny. Task Oriented Team Development (TOTD) is such a program.

5. Task Oriented Team Development (TOTD)

TOTD is a set of training materials designed to enable work teams at any level of an organization to improve their ability to attain their work goals. TOTD has team members meet to resolve work problems focusing directly on the work to be done instead of using simulations, games, or exercises to facilitate team development. It is designed to be used directly by managers with their teams without any consultant resources.

The two principles built into TOTD with respect to the problem areas of goals, roles, procedures, and interpersonal problems are:

1. Symptoms versus problems--where interpersonal

problems on teams are, more often than not, symptoms of unresolved problems in one of the other three problem areas (goals, roles, or team procedures) rather than causal factors of poor team performance.
2. A hierarchy of issues--where a hierarchy or natural order in which a team ought to address its problems. Goal-type problems should be handled before role-type problems. Goal and role problems should be handled before procedural problems [Rubin, Plovnick, and Fry, 1975].

The program design and methods are broken into three general sections. The first section consists of an "Introduction" explaining why all teams must engage in some form of team development if they are at all interdependent, and a short description of the concepts and methods of TOTD. A series of four "Guidelines Sections" focus on: (a) how to get started, (b) how to use the program, (c) special concerns of the team's formal leader, and (d) potential roles for internal/external facilitators. The third section is the largest and is made up of the eight modules, each dealing in a specific problem area known to impact on team functioning. The eight modules are broken down into three phases and outlined as follows [Plovnick, Rubin, and Fry, 1975]:

1. Phase One: Diagnostic:
   a. Module One: "Do We Want Team Development?"--Information is collected and diagnosed and the team decides if team development is necessary and if they want to use this particular training aid.
2. Phase Two: Developing Skills and Awareness:
   a. Module Two: "A Team Doing What?"--Defining a Core Mission--The team insures that everyone understands the core mission on why they have to work together, it is the accomplishment of this mission that all subsequent modules are directed.
   b. Module Three: "Who Does What Around Here?"--Role Definition--The team works with Harrison's [1973] "Role Negotiation Model." They develop a clearer definition of their roles and what they need to be

doing to help the team achieve its interdependent mission.

c. Module Four: "Who Does What Around Here?--Role Negotiation--Inherent conflicts are dealt with using negotiation skills learned in Module Three and a problem-solving method is also learned. Specific times are set for negotiating sessions and written contracts result, thereby further clarifying "who is to do what" on the team.

d. Module Five: "How Decisions Get Made Around Here"--Using a modified Vroom (1972) model on decision making the team examines how decisions are made.

e. Module Six: "How We Function as a Group"--The team develops skills at recognizing and developing leadership and membership behaviors that lead to more effective decision-making meetings.

f. Module Seven: "What it Feels Like to Work Around Here"--Norms--The team examines general behavior and assumptions which "drain" the energy from the group. They learn to improve the workplace to make it more satisfying and productive.

3. Phase Three: Application/Transfer to Daily Work

a. Module Eight: "A Team Doing What"--Revisited: Defining Future Objectives--The team uses the skills learned previously to recheck their mission and set specific performance goals to accomplish their mission. Mager's (1972) procedures for goal analysis are used. Mechanisms for ongoing maintenance, performance evaluation, and development are set up.

The modules are designed to be completed in about three hours each. Prior to each module team members are required to do from 30 to 60 minutes of reading and written work. The modules are recommended to be spaced no more than one week and no less than two days apart. Team development, then, becomes viewed as teamwork on the job versus an isolated, specialized training activity. The modules become integrated in the day to day operations of the team and are applied to real and present issues. Consistent with the hierachy principle stated earlier, it is recommended

that the modules be done in the sequence provided [Plovnick, Rubin, and Fry, 1975].

Task Oriented Team Development (TOTD) focuses on team development and brings together development strategies found in other team building programs that are currently being utilized in organizations. Dyer's [1977] pre-work questionnaire, Harrison's [1972] "Role Negotiation Model," Vroom's [1973] decision making model, Schein's [1968] process consultation skills, Mager's [1972] goal analysis procedures, and round robin and brainstorming techniques along with individual prework found in the Nominal Group Technique [Delbecq, Van de Ven, and Gustafson, 1975] are all incorporated in part during the TOTD process.

TOTD has been used in civilian firms and hospitals and was shown to be a proven technological resource which enabled the facilitator or consultant to be less involved with respect to team development activities, freeing up time and energy required for more complex large system issues. TOTD has also been used by top management down through line foremen with no language understanding problems [Plovnick, Rubin, and Fry, 1974].

H. THE STUDY

To determine the cost effectiveness and format appropriateness of Task Oriented Team Development (TOTD) as a Navy team development program is the purpose of this investigative study. TOTD was administered to officers in

Navy and Coast Guard units at Norfolk, Virginia and Pearl Harbor, Hawaii. Time-one and time-two questionnaires were given to all units involved. Control teams went through local team development programs primarily at San Diego and were evaluated using the same instrumentation as the treatment groups. The first chapter of this thesis has given a background of team development and has discussed key dynamics and processes that groups go through in their development. Chapter II describes the methodology, conduct, organization, description, and how the data was processed. Chapter III gives the results of the questionnaires. The meanings of the findings are discussed in Chapter IV. Chapter V is the concluding chapter providing what the study found, what the weaknesses of the study were and what is recommended to be done with TOTD in the Navy. Appendixes A, B, C, D, and E provide detailed recommended changes proposed for TOTD before wide-scale Navy usage.

II. METHODOLOGY

A. CONDUCT OF THE STUDY

The Bureau of Navy Personnel, Human Resources Management Division (PERS 62), continually reviews materials, training aids and packages for Human Resources Management Specialist (HRMS) usage. In 1976 and early 1977, Task Oriented Team Development (TOTD) had been used and recommended by HRMC Pearl Harbor for Navy-wide usage following further evaluation and changes [Bibby, 1977]. The Navy Postgraduate School agreed to study the applicability of TOTD for wide-scale Navy use. In August of 1977, 48 TOTD manuals were ordered and sent to HRMC Norfolk and Pearl Harbor. HRMC San Diego was chosen as a control site, where the evaluation questionnaire and response sheets were given to units undergoing local team development programs. The experimental groups (those conducting TOTD modules) came from HRMCs Norfolk and Pearl Harbor. The initial visit introduced the evaluation questionnaires and methodology to be followed in the study of TOTD. From October 1977 through April 1978 TOTD was administered to fleet units. The results from nine units were used as the experimental data.

In January, 1978 a preliminary report utilizing largely data from HRMC Pearl Harbor and civilian firms was forwarded to the Bureau of Navy Personnel [Gustafson, 1978]. HRMCs

Pearl Harbor and Norfolk were having problems in convincing Naval units to participate in the team development program because of the time committment (eight modules at three hours per module). In late January 1978, the author of this thesis was temporarily assigned to HRMC Norfolk for Human Resources Management Field Work. In association with the field work the author visited several Naval units presenting TOTD as a team building package. As data began coming in, it was soon obvious that the original time-one and time-two studies were not available from all test or control units and in some cases, only partial instrumentation results were available. All units that participated in TOTD had Human Resources Management Specialists present. Only one unit was able to complete the TOTD program as written. In all cases modules had to be combined, deleted, and modified for individual unit use.

B. THE SAMPLE

In four of the five experimental Navy and Coast Guard units, the participants were Lieutenants (O-3) and above. In the one remaining experimental group, three senior enlisted persons participated. The control groups were made up of officers and enlisted. The experimental sample was not random. The units specifically requested team building after TOTD was presented to them as a form of team building.

The experimental units were: (a) an amphibious ship's Department Heads, Executive Officer, and Commanding Officer; (b) a Coast Guard District Staff with the Admiral, Chief of Staff, and senior staff officers; (c) one aviation squadron's Department Heads, Executive Officer, and Commanding Officer; (d) one Explosive Ordinance Group Commander and his team leaders and senior enlisted people; and (e) one HRMC planning team consisting of the Commanding Officer, Executive Officer, Operations Officer, Administrative Officer, Data Processing Officer, and Supply Officer. Three members of the HRMC group had participated in TOTD earlier.

The control units were larger in number on the average and had a greater percentage number of enlisted men down to E-5 in rate. The majority of the members in one control group were officers, in another control group the majority were enlisted men (E-5 and above).

C. INSTRUMENTATION

The study incorporated the use of four instruments for measuring the effects of TOTD and other team development activities on Navy units. The four instruments were: (a) a "forced-choice" questionnaire given at the beginning and end of the team building exercise, (b) a Workshop Evaluation System Form (WES) given at the end of team development, (c) the Human Resource Management (HRM) Survey given twice, at the beginning and end of team development;

and (d) the TOTD questionnaire found in Module One and given again during Module Eight of TOTD.

Originally, only the "forced-choice" questionnaire and the WES Forms with open-ended questions were to be given to the participants. However, due to misunderstandings of directions, lack of central control, and a need to further validate the results of the two original instruments, the HRM Survey Data and TOTD questionnaire were utilized as pre and post-evaluation instruments.

1. Force Choice Questionnaire

Forced-choice questionnaires first appeared on a wide-scale at the end of the Second World War as a new and less subjective method for the Army to rate officer performance. The underlying principles or assumptions for a forced-choice questionnaire are: (a) respondents do not know whether an answer given is necessarily favorable or unfavorable; (b) answers are able to be numerically coded by an examiner; and (c) there needs to be a fair agreement on the criteria for favorable and unfavorable responses on the part of the examining authority to determine the numerical rating for each answer [Verron, 1964].

Forced-choice questionnaires were designed originally to remove the "halo" effect of most rating systems. Forced-choice questionnaires consist of a series of tetrads, sets of phrases or adjectives, relating to work performance [Coran, 1949]. The forced-choice scale used in this study

contains 21 tetrads on characteristics of groups. The participant is asked to indicate which of the statements is most and least characteristic of the group. Of the four possible responses in the tetrad, one or two are favorable phrases and two to three are unfavorable phrases. Two answers are required in each tetrad; the phrase that "most" describes the team and the phrase that "least" describes the team. The respondent is "forced" to choose only one of each. If the respondent chooses a favorable phrase for the "most" positive a score is given. If an unfavorable phrase is chosen for the "most" no score is given. The opposite is true for the "least" characteristic response. A sample questionnaire is given in Appendix F.

By forcing the respondent to ignore general impressions and answer "most" and "least" for every tetrad of phrases subjectivity can often be removed [Richardson, 1949; Sisson, 1949]. The findings of earlier studies have not been borne out completely for the higher validity of a forced-choice questionnaire because there is often disagreement on what is exactly always more favorable than another characteristic or situationally inferior characteristics [Vroom, 1973]. Also, the forced-choice questionnaire is uncomfortable for the participant to take and the respondent will often not fill in the response blank because they are "forced" to make difficult "most" and "least" choices about largely variable characteristics that tend to change over time [Coran, 1954; Berkshire and Highland, 1953].

The forced-choice questionnaire used in this study was developed by Commander Charles Gustafson while he was attached as a management consultant at the Human Resources Management Center at Pearl Harbor. It follows closely the design of the original Army forced-choice questionnaire [Sisson, 1949]. The forced-choice was chosen for the primary instrument because it could be numerically organized and indicated decided shifts and concentrations of answers. Therefore, this instrument could measure both the general "health" of a group along with how the group tended to come together on specific points and disagree on others.

2. Workshop Evaluation System (WES)

The WES is designed to provide a systematic approach to the evaluation of workshops. Normative data collected from over 40,000 workshop participants are provided so that the workshop effectiveness can be ascertained. The WES is designed to provide an overall effectiveness of the workshop in seven dimensions. The dimensions are: organization, objectives, presenter (consultant), ideas and activities, scope (coverage), beneficiality, and overall effectiveness. The scale is numbered "1" through "7." "One" is considered the most negative response on each of the dimensions and an answer of "7" is the most positive answer (see Appendix G). When all of the responses are collected and tabulated, a mean score for every dimension is computed and changed through the use of a table to a standard score. The

standard score is then put into a percentile rank that has been arrived at by previous answers to the dimensions by nationwide workshop participants. "Workshop" refers to any structured learning activity designed for the purpose of enhancing knowledge, skills, or attitudes of the participants [McCallon, 1976]. Open-ended questions concerning the strengths and weaknesses of the learning experience are also included in the WES allowing participants to answer specific items of concern and praise. The WES was thought to be an appropriate counter-measuring device because of its normative data base and open-ended questions.

3. Human Resources Management (HRM) Survey

The HRM Survey is composed of a eighty-eight standard scientifically designed questions covering the broad spectrum of topics generally involved in the management of people. Since 1973 the Navy has been using the survey as the basis for its Survey Guided Development approach to Organization Development [Forbes, 1977]. All dimensions of the survey were studied from a time-one point before TOTD was administered and a time-two point after TOTD was completed, to determine the effect TOTD had upon the team. There was no survey information on the control groups not participating in TOTD. HRM survey data was used to substantiate trends arrived at using the other instruments of measurement.

4. Task Oriented Team Development (TOTD) Questionnaire

In four of the experimental groups a time-one and a time-two response on the TOTD questionnaire, found in the first module of TOTD, was used. This questionnaire uses a story identification style presenting the respondent with two reasonably plausible, short paragraph stories and then asking the participant to indicate his own position with respect to these stories. The stories are direct and relate to the roles, norms, goals decision making and interpersonal communications processes of the team the respondent is a member of. There are 9 scales with two stories in each scale. Five responses are given by the letters "a" through "e" and the respondent chooses one of the five possible answers. Each end of the scale corresponds to one of the stories, an answer "c" means the respondent felt the team was in between the two stories given. The stories were written and arranged so that an "a" is the most negative response corresponding to a story that is consistently pointing out weaknesses in groups. The response of "e" corresponds to the story that has the positive group characteristics. Each of the letters are given a numerical representation, "a" being one and "e" being 5. The higher the number for each response the more favorable the answer (see Appendix H).

D. ANALYSIS

The basic analysis strategy was to determine the extent that change had taken place with team members from a time-one (pre-test) to a time-two (post-test). The primary goal was to find out how much the TOTD groups had changed based on the participant's answers to questions on how they observed themselves and their team's functioning before and after team development. The results of the TOTD groups were compared with control groups that had undergone another form of team development. A second part of the analysis concerned the participant's attitude specifically towards TOTD as a team building program.

The results from the "forced-choice" questionnaire were compared from a time-one and time-two standpoint for specific movement within the TOTD groups and control groups and between the TOTD groups and control groups. A "chi-square qualitative analysis" between TOTD and the control groups was used in addition to a "t-test" of the means and a "F-test" between time-one and time-two variances. One of the objectives was to determine if a "null-hypotheses" stating that the two aggregate groups (TOTD and the control groups) were statistically the same, could be rejected. If the two groups were statistically different by a level of significance of .20 based upon t-tests, F-tests and a chi-square qualitative analysis, the null hypothesis would be rejected and the groups would be considered statistically different.

The Workshop Evaluation System (WES) was used specifically to determine the participants' attitudes towards TOTD void of the actual change that had taken place in the specific group and individual characteristics. The responses from seven dimensions of the experimental groups were statistically compared with the control groups and the national average of workshop responses. The second section of the WES questionnaire consisted of open-ended question responses grouped into similar areas of strengths and weaknesses noted by the participants to the team development program.

The Navy's Human Resources Management (HRM) Survey responses were studied in two of the five TOTD groups. Specific indices dealing with teamwork and interpersonal relationships were analyzed from a time-one, time-two perspective to determine a statistically positive or negative change. A "Wilcoxon 'W' sign test" [Mosteller and Rourke, 1973] was performed and a level of significance attained. The Wilcoxon sign test uses signed ranks of difference in the location of two sample means. The Wilcoxon statistic represents a move between the sign test and the direct treatment of the raw observations through the t-statistic. The sign test disregards the size of the measurements while the Wilcoxon test takes modest account for size. The test is not sensitive to great differences in the size of differences unless the sample size is large.

The Task Oriented Team Development Questionnaire was given at a time-one and time-two point with four of the

five TOTD teams. Seven dimensions were analyzed using t-tests of time-one and time-two means and a F-test between the time-one and time-two variances to determine which dimensions had changed the most.

III. RESULTS

A. INSTRUMENTS

1. Task Oriented Team Development (TOTD) Questionnaire

Four Navy and Coast Guard units filled out time-one (T1) and time-two (T2) TOTD questionnaires. Twenty-five respondents scored the questionnaires before the TOTD workshop began and 26 respondents completed the questionnaires after TOTD was complete. The overall results from the four units are displayed in Table 1. As seen in Table 1 all the aggregate means showed a positive gain. Five of the eight mean scales were significant on a one-tail "t-test" as indicated in the tables presented. The scales of "Role Clarity" and "Participation/Influence" showed the most significant gains.

A sign test using the equation:

$$z = \frac{|D| - 1}{\sqrt{n}}$$

showed significance in two of the four TOTD groups.

2. Human Resources Management (HRM) Survey Results

Thirteen indices were studied of the two TOTD groups that had a T1 and T2 HRM Survey Questionnaire administered to them. These indices were chosen because they represented the greatest validity with team development characteristics.

TABLE 1

A. MEAN, STANDARD DEVIATIONS, AND "t" TEST RESULTS OF TOTD QUESTIONNAIRE (4 UNITS)

SCALE	TIME 1		TIME 2	
	MEAN	STANDARD DEVIATION	MEAN	STANDARD DEVIATION
GOAL CLARITY	3.40	.98	3.54	1.45
**ROLE CLARITY	3.56	.89	4.08	.69
ROLE CONFLICT	3.64	.91	3.65	1.25
***PARTICIPATION/ INFLUENCE	3.00	1.19	3.88	.93
*MEETING EFFECTIVENESS	3.28	1.02	3.50	.86
*RECOGNITION/ FOLLOW-UP	3.40	.94	3.77	.74
*SUPPORT COHESIVENESS	3.76	.52	4.0	.69
ENERGY	3.24	.93	3.31	.93

*** .005
** .025
* .25

TABLE 1 (CONTINUED)

B. TOTD TEAM DATA SUMMARY SHEET

SCALE	*UNIT #1			UNIT #2			UNIT #3			**UNIT #4		
	6 Participants			7 Participants			8 Participants			5 Participants		
	T1	T2	Gap	T1	T2	Gap	T1	T2	Gap	T1	T2	Gap
1. Goal Clarity and Conflict	3.43	4.29	+.83	3.67	4.16	+.49	3.38	2.75	-.63	3.00	3.80	+.80
2. Role Clarity	3.86	4.29	+.46	3.0	4.0	+1.0	3.25	3.75	+.50	4.25	4.40	+.15
3. Role Conflict	3.86	4.57	+.71	3.33	3.17	-.16	3.63	3.13	-.50	3.75	4.0	+.25
4. Participation/ Influence	3.71	4.57	+.86	2.67	3.33	+.66	2.88	4.25	+1.37	2.50	3.0	+.50
5. Meeting Effectiveness and Follow-up	4.0	4.14	+.14	3.17	3.50	+.33	3.0	3.0	--	2.75	3.40	+.65
6. Recognition and Involvement	4.28	4.30	+.02	2.83	3.33	+.50	3.25	3.75	+.50	2.75	3.60	+.85
7. Support/ Cohesiveness	4.43	4.29	-.14	3.67	3.67	--	3.5	4.0	+.5	2.5	4.0	+1.5
8. Energy Significance	3.71	4.14 *	+.43	3.33 not significant	3.17	-.37	2.87 not significant	2.5	-.38	3.0	3.6 **	+.6

Sign Test * = .10 significance
** = .025 significance

aggregate sign test = .10 significance

Results are displayed on Table 2. The respondent's answers reflect possible scores of one to five, five being the most positive. A "Wilcoxon 'W' Sign Test" [Mosteller and Rourke, 1973] of significance between the two means was performed with the two groups. The first group (a Navy ship) showed a significant (.005 level of significance) increase. The second group did not show a significant increase by the 'W' sign test. The two group's aggregate score did show a significant positive gain. The first group was not included as one of the test units in the TOTD Questionnaire Results (Table 1).

The areas that both groups showed the most positive increases were in "Decision Making," "Peer Support" and "Peer Team Coordination." In these areas each management group had a positive move of +.4 or greater.

In group #1, seven of the ten "most negative" HRM survey questions at T1 were perveived as "most positive" at T2. T2 "most negative" questions contained no questions from the "Peer Leadership" or "Group Process" areas, whereas six of the ten "most positive" questions at T2 were related to team functioning and command climate issues addressed by TOTD.

3. Forced Choice Questionnaire

Appendix F displays the forced choice questionnaire used in this study. The 21 tetrads require two answers each, one for the "most" and one for the "least" characteristic.

TABLE 2

HUMAN RESOURCES MANAGEMENT SURVEY RESULTS

TIME ONE (T1) AND TIME TWO (T2) COMPARISONS

	GROUP 1			GROUP 2		
INDICE	T1	T2	GAP	T1	T2	GAP
1. COMMAND COMMUNICATION	3.6	4.0	+.4	3.7	3.8	+.1
2. DECISION MAKING	3.1	3.5	+.5	2.8	3.8	+1.0
3. MOTIVATION	3.4	4.1	+.7	3.9	3.2	-.7
4. HUMAN RESOURCES EMPHASIS	3.5	3.8	+.3	3.6	3.5	-.1
5. SUPERVISORY SUPPORT	3.9	4.3	+.4	4.0	4.3	+.3
6. SUPERVISORY TEAM COORDINATION	3.5	3.9	+.4	4.4	4.0	-.4
7. SUPERVISORY GOAL EMPHASIS	4.2	4.0	-.2	4.3	4.1	-.2
8. SUPERVISORY WORK FACILITATION	3.2	3.5	+.3	3.6	3.3	-.3
9. PEER SUPPORT	3.5	3.9	+.4	3.2	3.6	+.4
10. PEER TEAM COORDINATION	3.4	3.9	+.5	2.9	3.6	+.7
11. PEER TEAM EMPHASIS	2.9	3.6	+.7	NO DATA		
12. PEER GOAL EMPHASIS	3.0	3.2	+.2	2.9	3.3	+.4
13. PEER GROUP FACILITATION	2.6	3.2	+.6	3.0	2.8	-.2

Wilcoxon Sign Test Time 1 and Time 2	Group 1	Group 2	TOTAL
	≤.005	NO	≤.005

An "x" on specific blocks in each denotes the correct or most positive answer possible in each tetrad. When a respondent selected a correct answer, one point was given to him. There was a possibility of 2 correct answers in each of the 21 tetrads for a total of 42 points per respondent. Each tetrad was constructed to have a maximum of 2 points for correct answers, 1 point for the "most" and 1 point for the "least" (see Table 3, Appendix F, and Appendix I).

Two TOTD groups had both time-one (T1) and time-two (T2) questionnaires administered with a total of 15 respondents. Two control groups undergoing team development other than TOTD had T1 and T2 questionnaires administered with a total of 36 respondents. Two additional TOTD groups had T2 questionnaires filled out for a total of 4 TOTD groups of 29 respondents filling out T2 questionnaires. Two additional control groups were given a T2 questionnaire making 4 control groups of 44 respondents given the T2 questionnaire. All results were computed for percentage of correct answers in each question. The percentages were then compared statistically, but T1 and T2 statistics were kept separate from T2 aggregated statistics.

Table 3, part A, displays the T1 and T2 aggregated data for TOTD and control groups (15 respondents for TOTD and 36 for the control groups). The time-two aggregate data in part B of Table 3 has the largest number of respondents (29 for TOTD and 44 for the control group).

The null hypothesis that Table 3 cannot reject states that the two sets of statistics (TOTD versus teams undergoing other team development) were not different. To reject the null hypothesis the statistical tests would have to indicate that the TOTD groups and control groups were different by a 80% confidence or better. Then it could be stated that one form of team development had statistically achieved higher results than the other (See A3, B of Table 3).

A qualitative test was used between the two groups. A "chi-square" qualitative analysis [Hartkemeier, 1968] was performed to determine how probable the differences observed in Table 3 were due solely to chance. The chi-square was to measure the extent which the cell contents in Table 3 section A-3 actually varied from each other. The probability based on chance resulting from the qualitative classification and 1 degree of freedom, was greater than 30% as Table 3 displays. Also, the results from the t-test and F-tests both had greater than 20% probability level of chance. Therefore, the null hypothesis cannot be rejected and the two groups remain largely indistinguishable statistically speaking. It should be noted that there was a statistically significant change for the TOTD groups from T1 and T2 as indicated by t-tests and F-tests.

4. Workshop Evaluation Scale (WES)

The WES seven dimension questionnaire and open-ended questions was used to concentrate participant attention on

TABLE 3

FORCED CHOICE QUESTIONNAIRES RESULTS OF

EXPERIMENTAL AND CONTROL GROUPS

A. TOTD AND CONTROL GROUPS HAVING T1 AND T2 RESULTS
NUMBER OF RESPONDENTS: TOTD = 15; CONTROL GROUPS = 36

1. TOTD	MEAN	STANDARD DEVIATION	t TEST	F TEST $\frac{V1}{V2}$
TIME 1	.607	.18	*8.53	**3.0
TIME 2	.88	.105		

2. CONTROL				
TIME 1	.78	.103	*3.33	***1.325
TIME 2	.85	.091		

3. QUALITATIVE ANALYSIS BETWEEN TOTD AND CONTROL GROUP USING CHI-SQUARE AS A MEASUREMENT FOR LEVEL OF SIGNIFICANCE

	T1	T2	TOTAL
TOTD (avg pts)	25.49 (A)	36.79 (B)	62.28
CONTROL (avg pts)	32.55 (C)	35.70 (D)	68.25
TOTAL	58.04	72.49	130.53

42 Points Possible

2 Pts per Tetrad

21 Tetrads

$$\text{CHI-SQUARE} = \frac{N\,(AD-BC)^2}{(A+B)\,(C+D)\,(A+C)\,(B+D)} = .603$$

greater than 30% probability that difference is chance alone

* .001 percentage based on chance
** .01 percentage based on chance
*** .20 percentage based on chance

TABLE 3 (CONTINUED)

B. FORCED CHOICE QUESTIONNAIRE RESULTS OF EXPERIMENTAL AND CONTROL TIME 2 ONLY COMPARISONS

	TOTD	CONTROL
Number of Respondents	29	44
Mean (percentage correct)	.8462	.8714
Standard Deviation	.092	.0995
Variance	.008464	.0099

"t" Test between groups	1.204	greater than 20% probability by chance
F Test $\frac{\text{Variance larger}}{\text{Variance smaller}}$	1.17	greater than 20% probability by chance

TOTD as a program. Each of the seven dimensions has a normative scale that indicates a comparative standard score and percentile with nationwide workshops. Table 4 displays the aggregate outcome of the WES data.

As can be clearly noted TOTD ranked far below national and control group means, standard scores, and percentile ratings. The participants rated particularly, the "Manual as Consultant," "Ideas and Activities," and "Overall Effectiveness" dimensions very low. The control groups scores reflected more of a national average and scored reasonably well.

The "open-ended" questions asked the participants what they considered particular strengths, weaknesses, and general comments concerning the team building programs. TOTD open-ended questions listed the following areas of strengths in the order of frequency mentioned:

1. structured nature of manual "forcing" members to respond to issues;
2. theories and analytic approach to problem resolution and solving;
3. transferable management techniques to day to day decision making;
4. open communication between group members.

The areas of weakness in the TOTD manual listed in the open-ended questions in the order of frequency mentioned were:

1. civilian format, not structured for a military environment and difficult to transfer for military usage;
2. information in manual redundent, over-specific at times, and longer than it had to be;

TABLE 4

WORKSHOP EVALUATION SCALE RESULTS

FOUR GROUPS OF TOTD RESPONDENTS, TWO CONTROL GROUPS

EXAMPLE $\frac{5.86}{(91/24)}$ Mean of 7 possible (standard score with 100 mean standard deviation 20/percentile based on national scores)

DIMENSIONS	TOTD GROUPS				CONTROL GROUPS	
	1	2	3	4	1	2
1. ORGANIZATION	5.86 (91/24)	5.16 (69/8)	5.0 (63/7)	6.13 (99/41)	7.0 (126/99)	6.33 (106/60)
2. OBJECTIVES	5.71 (84/14)	5.0 (63/6)	5.67 (83/14)	5.75 (84/14)	6.45 (107/66)	6.29 (106/60)
3. MANUAL AS CONSULTANT	4.71 (54/23)	4.67 (52/3)	5.44 (75/7)	5.0 (62/5)	6.82 (116/92)	6.10 (94/28)
4. IDEAS AND ACTIVITIES	6.0 (92/31)	4.67 (48/3)	5.22 (67/5)	5.5 (75/9)	6.64 (110/83)	5.86 (89/20)
5. SCOPE	5.71 (90/25)	5.5 (83/25)	5.0 (67/5)	5.63 (87/20)	6.0 (98/45)	5.79 (92/27)
6. BENEFIT	6.0 (99/46)	4.67 (60/3)	5.67 (90/25)	4.62 (58/3)	6.45 (112/77)	6.24 (106/64)
7. OVERALL EFFECTIVENESS	5.85 (97/31)	4.83 (76/6)	5.0 (79/7)	5.13 (82/8)	6.82 (116/92)	5.91 (98/37)

3. some modules were felt to be stronger than others and some of the modules could be deemphasized or dropped;
4. module success determined by prework which was not completed in too many cases by participants;
5. participants would get off the subject and drift from the outline.

B. SUMMARY OF RESULTS

Three of the instruments used, the TOTD Questionnaire, the HRM Survey, and the Forced-Choice Questionnaire, indicated statistical positive shifts in the measurements of individual and group characteristics for groups undergoing TOTD. The positive shifts were not strong enough, to make the TOTD group results better than the control groups results. It must be reemphasized that control groups were also undergoing team development exercises and were not untreated control groups. Table 3 indicated that the "null hypothesis" of the teams not being different could not be rejected at the .20 level of significance.

The results of these three instruments imply that TOTD was effective in causing positive growth in a wide variety of team characteristics. Because of the expected facilitator/consultant time savings that TOTD offers, plus the enormous flexibility and reference aid aspects of TOTD, results of the "forced choice questionnaire" which are not significantly different between TOTD and control groups can be considered a favorable outcome for TOTD.

The WES results indicated clearly as compared to control groups and nationwide averages that participants reacted critically to TOTD as a program. There are several explanations for the low relative scores of TOTD: (a) the predominant feeling that TOTD was a civilian model because of the language and format; (b) the fact that each group was presented a modified packet with extensive deletions; and (c) differential HRMC facilitator inputs from a time and content viewpoint.

The greatest weakness of this study was the low number of units that actually participated coupled with partial instrumentation results from many of the units. For instance, only two of the five TOTD trained units had T1 and T2 Forced-Choice Questionnaires, making the implications and validity of the "Chi-square Qualitative Analysis" test weak. The units were not randomly chosen, but a wide cross-section of the Navy was represented.

The second greatest weakness was the fact that each of the TOTD groups received TOTD presented to them in different ways. One group had all 8 modules, one group had only 2 modules, the other three groups had 3, 4, and 5 modules presented. Facilitator participation also varied from a basically silent observer to an active leader and guider of discussions. In some modules specific items were deliberately deleted or added which deprecated the external validity of the exercise.

Because of these shortcomings it is very difficult to draw fleet-wide applications to the results. Therefore, if TOTD is accepted and re-written, another evaluation testing program should be administered before wide-scale fleet distribution.

IV. DISCUSSION

A. OVERALL MEANING OF FINDINGS

In four of the five groups that underwent TOTD training, significantly positive shifts of team characteristics were noted. HRM Survey results and T1 and T2 TOTD questionnaires reinforced findings of the "Forced-Choice Questionnaires" that a significant positive shift in interpersonal and team characteristics did occur. Control groups undergoing team training also exhibited positive shifts on the "Forced-Choice Questionnaires." The "t-tests," "Wilcoxon sign tests," and "F-tests" showed significant positive changes in both the TOTD and control groups. Using a chi-square comparison (see Chapter III) and T2 results, TOTD and control groups results were not significantly different.

The greatest limitation on drawing statistical inferences lies with the small number of units that participated. Also, each unit was presented the TOTD manual in a modified format with some modules given to some test units and deleted in others. With only five Navy and Coast Guard units involved in the testing and evaluation instruments, far-reaching Navy-wide validity cannot be assured even after a complete rewriting of the TOTD manual to reflect Navy examples and language. It is therefore necessary to re-test the revised modules before wide-scale Navy usage. Contract considerations

should reflect the possible modifications following such a re-testing program.

The Workshop Evaluation Scale (WES) noted that TOTD was viewed significantly lower than nationwide workshops and control groups. The reasons for the low scores were seen to be caused by: (a) the length of TOTD compared to the normative workshops; (b) the fragmented presentation of TOTD; and (c) the civilian bias that TOTD displayed. The normative scale that TOTD was compared with was made up of consultant led workshops that were of short duration (2-3 days). It is assumed that these normative workshops were also of a type where the participants were largely entertained by facilitators or lectured to. The participants in the TOTD groups were less entertained by the facilitator or program and were forced to do prework and homework. This added degree of work intensity combined with the longer, spread-out time committment to TOTD could have been a major cause of the lower WES scores. Additionally, all but one of the TOTD groups had the package presented in combinations of modules with some section of the TOTD package deleted because of operational time constraints; this was another reason why TOTD did relatively poorly when compared to other groups that were experiencing workshops done in their entirety. Thirdly, the civilian format caused many of the Navy participants to think that TOTD was not really relevant for a military scenario. These feelings were expressed as the number one weakness on the WES questionnaire.

The open-ended questions cited several weaknesses in the TOTD manual. The primary weakness as stated above was the civilian language and examples used throughout the modules. The Navy HRM program experienced largely unexpected resistance in its beginnings for violating Navy norms in the language ("jargon") of the HRM specialists and perceived civilian instruction techniques [Forbes, 1977]. Any new program in the military must be particularly sensitive to this point. All Navy-wide management programs must appear to be Navy models, with Navy language, examples, and Navy organizational norms built in (see Chapter I, Sections C-1 and C-4).

The open-ended question answered by participants brought up particular issues around the structure stating positive and negative consequences of having a time and step format forced upon them. Structured, pre-written programmed modules traditionally are criticized for their lock-step type of rigidity. Another disadvantage of programmed team development lies with its standardization which often does prevent a team from dealing with what they believe are more relevant or pressing problems [Beer, 1976]. Many of the same criticisms of TOTD were found to be the very strengths that other participants noted. Many participants were pleased to be forced into a structured dialogue on certain issues. There were complaints that individuals still tried to get off the subject and would not conform to the steps in each module. Some participants complained that members were

not properly prepared for the modules and because of their unpreparedness the whole module suffered. This is a key issue that facilitators and consultants must address from the outset of TOTD (see Appendix E). Other members did not see a follow-up program specifically mentioned in the manual. Despite what the participants might have felt toward particular design peculiarities of the TOTD program, the fact is that the instruments did report a statistically significant positive shift of group characteristics.

As clearly as changes were noted in the groups undergoing TOTD there is a need to greatly correct and modify the TOTD manual to conform to a Navy environment. Few Navy units experienced TOTD because of its current eight module, three to four week design which demanded too much of the unit's time. Many units considered TOTD but failed to participate because they were unable to dedicate so much time to team development despite their expressed need. Combined with the fact that the materials appeared like they were designed more for civilian than a military organization, Navy teams were even more reluctant to be "guinea pigs" for a new program.

The need to offer certain modules independently as a particular team building workshop or a follow-on workshop was advocated by participants and consultants alike. Because a follow-on module was not precisely pointed out, some of the participants felt that they would lose much of the skills learned in the TOTD training. Modules Seven

and Eight were thought by a few of the members to be productive follow-up or refresher modules, that could be used at six month to a one year period following the TOTD training. This writer believes that the revised Module Four would be an excellent module to serve as a review module (see Appendix E).

B. HOW FINDINGS RELATED TO EXPECTATIONS

1. General Issues

The fact that so few Navy units got involved with TOTD over the six month testing period was a surprise but understood in light of the responses of the open-ended questionnaire responses cited earlier in this chapter. It was clearly indicated that the length (eight modules) and civilian format dissuaded most Navy units from considering the program. It was also predicted that some of the participating units would be able to conduct TOTD without the use of an outside HRMC consultant. This did not come to pass. All test units requested a facilitator or because of the consultant design changes in the TOTD program it was necessary for a facilitator to be present to guide the participants through it. Facilitator's found they were putting approximately 15 minutes per hour of workshop time on preparation. This time figure was expected to be less as the facilitator became more accustomed to the materials and the modules were pre-arranged in a satisfactory manner so that

module combination, deletion, and changes did not have to be accomplished beforehand. Since only one facilitator was involved in the TOTD sessions there was no need for debriefing. Comparatively speaking, the "control" team programs took approximately the same time for preparation per consultant but in most cases two facilitators were involved and this necessitated a debriefing time that averaged between 5 and 10 minutes of every training hour. Therefore, TOTD currently takes less than half the normal amount of facilitator preparation, delivery and debriefing time primarily because only one facilitator is involved.

Large time savings are predicted for future TOTD exercises. After a command has completed a revised (see Appendixes) TOTD module it is predicted that the members will be able to conduct the modules largely free from HRMC consultant assistance. It is recommended that at least Module One be observed by a facilitator to ensure that the leader and the participants understand and follow the materials.

Graduates from the newly formed Leadership, Management, and Education Training Program (LMET) should have many of the skills needed to be productive members of TOTD (see Chapter I, Section C-4). This tie-in between LMET graduates and the TOTD program may very well allow less facilitator involvement the first time TOTD is introduced in a command. If the Commanding Officer, Executive Officer, or some of the Department Heads are LMET graduates, they should possess

some of the requisite skills needed for successful TOTD completion. Armed with the revised "Facilitator Guidelines Section" of the TOTD manual (see Appendix D), the possibility of conducting TOTD without outside facilitators becomes greater and greater (see Table 5).

2. Expected Facilitator Time Needed

Because consultant time utilized in training is the primary reason of TOTD's comparative cost effectiveness, a break-down of time expenditures will assist in the determination of cost benefits that TOTD offers. These figures were obtained from consultants in the field and estimations based on the original figures given. The following figures pre-suppose that the revised Modules (see Appendixes) are being used and the HRMC consultant has experience facilitating TOTD and other team-building programs (see Table 5).

Pre-Module One:	Planning Briefing 30 minutes
	Briefing Group Leader on TOTD 60 minutes
Revised Module One:	Preparation 30 minutes
	Module One Presentation 270 minutes (includes set-up and clean-up time)
Revised Module Two:	Preparation 30 minutes
	Presentation 270 minutes (includes set-up and clean-up time)
Revised Module Three:	Preparation 30 minutes
	Presentation 270 minutes

TABLE 5

COMPARISON OF TOTAL FACILITATOR TIME FOR ONE FOUR HOUR BLOCK OF TEAM-BUILDING INSTRUCTION BETWEEN TOTD GROUPS AND CONTROL GROUPS

	TOTD	CONTROL (per facilitator)
PREPARATION	15-30 MINUTES	15 MINUTES
SET-UP	15 MINUTES	15 MINUTES
PRESENTATION	4 HOURS	4 HOURS
CLEAN-UP	15 MINUTES	15 MINUTES
DEBRIEFING TIME	ø	*30 MINUTES
INTRA-TEAM TRAINING	ø	*30 MINUTES
TOTAL	**4 HRS 45 MINUTES to 5 HRS = 1 FACILITATOR	4 HRS 45 MIN = 1 FACILITATOR 11 HRS 30 MIN = 2 FACILITATORS 17 HRS 15 MIN = 3 FACILITATORS

*One facilitator does not need.
**After a unit has had TOTD and has experienced participants or possibly LMET graduates, the HRMC facilitator time has the potential of being cut by half or more if more TOTD is called for.

Revised Module Four:	Preparation 30 minutes
	Presentation 270 minutes

Total facilitator time is 21 hours and 30 minutes for a unit that has never had TOTD and must have the maximum amount of HRM specialist time for 16 hours of scheduled group instruction time.

Teams possessing graduates of LMET or have previously participated in TOTD are studied next.

Pre-Module One:	Distributing and Exploring Facilitator Guide with Team Leader 90 minutes
Revised Module One:	Preparation 30 minutes
	Presentation 270 minutes (includes set-up and clean-up time)
Revised Module Two:	No facilitator needed
Revised Module Three:	No facilitator needed
Revised Module Four:	Possible facilitator involvement--Preparation 30 minutes
	Presentation 270 minutes

Total facilitator time is a maximum of 11 hours and 30 minutes and a minimum of zero time for 16 instructional hours if units have had TOTD before or possess qualified internal trainers (LMET graduates). All of the above facilitator figures could be compared to a normal HRMC team building session (not TOTD) of 16 instructional hours. In the non-TOTD sessions with normally two or more facilitators there would be approximately 46 hours of facilitator time involved if preparation, setting-up and cleaning-up, debriefing,

and actual presentation are considered. When two or more facilitators are used additional training time must also be built in to establish teamwork between the two consultants. This additional intra-team training time was not considered.

3. Cost of Manuals Vice Navy Procurement

Currently TOTD manuals cost $75 each and are available through McGraw Hill Publishing Company. Although it is not recommended that the Navy purchase manuals in their present form, the following calculations are introduced to help determine possible contract negotiations for rewriting the TOTD manual. Possible TOTD usage over the estimated life of the program will be studied.

There are approximately 2000 commands in the Navy today that are possible TOTD clients. The Human Resources Management Centers and Detachments work with around 300 commands a year through Human Resources Availability Periods and on special individual unit request. To determine the possible need of TOTD manuals in these units, a conservative figure of 25 percent of units utilizing HRMC, Ds' services is used (25% of 300 = 75 units). Since each participant would require a manual approximately 10 manuals per command (75 x 10 = 750) should be distributed. This writer found that in the test phase of TOTD approximately a quarter of the units responded that were made aware of the TOTD program. This percentage should improve with a revised set of four modules in a Navy format. For the purpose of

calculating usage, 25 percent will be used. Additionally, probably 75 percent of the commands introduced to TOTD will desire a manual as a reference guide to use specific modules. This would mean another 225 manuals a year for commands interested in TOTD as a reference resource.

Initially, at least 200 manuals or one for every two HRMCs, D consultants should be ordered. Every three years of the normal rotation period an additional 200 manuals should be ordered as replacements.

Of the 75 commands undergoing TOTD during the year it is believed that at least one member of each team will desire to use TOTD in his subgroup. Consultants in the testing of TOTD stated they believed TOTD could be utilized down to three management levels of the organization.

First Level:	Commanding Officer, Executive Officer, Department Heads
Second Level:	Department Heads, Division Officer, Leading Chief Petty Officers
Third Level:	Division Officers, Chief Petty Officers, Leading Petty Officers (E-5 and above)

Civilian results also confirm the ability to utilize TOTD down to blue-collar foremen and non-college educated participants with maximum results attainable. Therefore, an additional 750 manuals (75 units x 10 manuals per unit) would be ordered every year and another 750 manuals should be ordered the second year and thereafter as lower levels of the organizations utilize TOTD. The 750 manual figure

is used because it is felt that at least one member of each level of the organization will desire it for his sub-group.

The life expectancy for the TOTD manuals is conservatively set at five years although the manuals could easily be used longer. It is doubtful that the basic assumptions of the program or the need for teams to confront team building issues identified in the TOTD program will disappear from groups. However, new techniques for addressing the problems might very well be designed in more time-saving, cost-effective forms. These new techniques and developments in education could outdate the manuals over a 5 to 10 year period.

Therefore, breaking the estimate for the number of manuals needed by years, it is conservatively estimated that TOTD manual usage would be:

First Year:	200 HRMC, D for consultants 225 Commands interested in TOTD for reference 750 Commands undergoing TOTD "First Level" 750 Commands undergoing TOTD "Second Level"
	1925 Total for first year
Second Year:	225 Commands interested in TOTD for reference 750 Commands undergoing TOTD "First Level" 750 Commands undergoing TOTD "Second Level" 750 Commands undergoing TOTD "Third Level"
	2475 Total for second year
Third Year:	Same number as second year, 2475 manuals needed
Fourth Year:	Additional 200 manuals needed for HRMC, D replacement. 2675 manuals needed.

Fifth Year:	Same as second year, 2475 manuals needed
TOTAL	12,025 or approximately 12,000 manuals conservatively needed

The current McGraw Hill price of $75 could possibly be lowered by a substantial amount for large numbers ordered. By not accounting for inflation by purchasing the 12,000 manuals at one time the cost would be:

$75 x 12000 = $900,000 (full, one time price)

$50 x 12000 = $600,000 (discount $25 per manual)

$25 x 12000 = $300,000 (discount $50 per manual)

It is estimated that the Navy's printing costs for such a manual would be less than $2 per manual or $24,000 for a one time printing. Buying the manuals from McGraw Hill would not be feasible or advisable due to the high price and current eight module civilian structure of the manual. The above figures are provided for usage estimates and contracting fees.

C. IMPLICATIONS OF RESULTS

Task Oriented Team Development (TOTD) was found to be not significantly different (better or worse) as other team training methods currently being used by HRMC, Ds. Currently, the amount of facilitator time involvement for TOTD is approximately the same as for other team building if only one facilitator is used. Since normally two consultants co-facilitate teams going through training because of the heavy emphasis on facilitator presentation presently

being used during most training in HRMC, Ds, TOTD can offer an immediate 50% savings or more of consultant time. In the future it is forecast that graduates of the Navy's LMET School and individuals that have gone through a previous TOTD exercise, coupled with the revised "Facilitator Section" in the TOTD Manual will allow much less consultant time involvement for the HRM system (see Table 6).

TABLE 6

COMPARISON OF FACILITATOR TIME FOR

16 HOURS (4 FOUR HOUR BLOCKS) OF TEAM-BUILDING INSTRUCTIONS

	HOURS OF FACILITATOR TIME REQUIRED
TOTD (GROUP WITHOUT EXPERIENCE, REQUIRING FACILITATOR	21.5
TOTD (EXPERIENCED LMET GRADUATES)	11.5
CONTROL (TWO FACILITATORS)	46.0

V. CONCLUSIONS

A. MODULE DESIGN CHANGES

Task Oriented Team Development (TOTD) has been found to be a theoretically sound, programmed team development package that could be utilized Navy-wide following content and module design changes. Without the basic suggested changes of reducing the number of modules from eight to four and changing the language and examples to a Navy format, it is recommended that TOTD not be procured or distributed Navy-wide (see Appendixes).

During the evaluation phase of TOTD there was considerable resistance to accepting TOTD in sea and shore units because of the number of modules and scheduled time duration of the whole program. Four of the five Navy and Coast Guard teams that participated in TOTD did not complete the entire eight module package. Modules were combined and deleted in order for operationally time-constrained units to complete them. Recommendations from Human Resources Management Centers (HRMCs) were to streamline the modules so that some modules would be made optional and others combined. Eight separate meetings of key supervisors outside the normal working routine for a three to four week period was not practical for most operational Navy units.

This study therefore recommends combining Module One with Two, Module Three with Four, Module Five with Six, and parts

of Module Seven with Module Eight. The revised four module, 2 week set-up is considered much more amenable to Navy acceptance without degrading any of the desired results.

The actual set-up of the modules should also be rewritten so that the "Introduction and Steps" be made to stand independently so that they can be individually given without previous modules. It is recognized that the basic assumptions that TOTD rests on necessitates presenting the modules in a specific order with skills learned in previous modules being utilized. Therefore, units should follow in most circumstances the modular order that the manual sets up. However, in order to be more responsive to the needs of a wider number of fleet units the revised four module program should have options available where fewer modules could be used.

"Feedback" is a key part for any team development cycle (see Chapter I, Section C-5). Many of the TOTD exercises have feedback built intrinsically into the model. All modules have critique sections at the end of them which should be upgraded with time available for facilitator response and round-robin discussion where all participants have an opportunity to express what has happened to them. Feedback serves as a reinforcement of items learned and is considered an integral part of the learning cycle [Gagne, 1977].

The need for a follow-up module to be conducted from six months to a year following the completion of revised

Module Four was mentioned by some of the participants. This writer believes that such a module could follow much of the design of revised Module Four with all of the norms section (of the current Module Seven) incorporated within it. A separate "Introduction Section" for a follow-up module should be written in the same style as the other modules and be made available to HRMCs.

Since all of the modules will have to be rewritten in part, it is suggested that the original authors of TOTD be involved in the rewrite of the modules. Projected estimates of numbers of manuals needed are found in Chapter IV, Section B-2, that can assist in justifying the necessity for the rewriting of the modules. Before TOTD manuals are introduced into the fleet, a retesting of the revised manuals using control groups is called for. This should also be accomplished before mass printing is undertaken and could follow the instrumentation used in Chapters II and III of this thesis. Further modifications following the rewriting might be necessary and should be considered.

B. FACILITATOR TIME SAVINGS

The most cost effective advantage of TOTD over alternate forms of team development packages is that the structured set-up of the modules allow substantial facilitator time savings. TOTD uses approximately one-half the time to present currently because only one facilitator vice two are involved. There are opportunities for substantial further

time savings once a unit has experienced TOTD and can run the modules themselves. This excellent possibility is further enhanced by the revised "Facilitator's Guideline Section" (see Appendix D) and the projected introduction into the fleet of Leadership Management Education Training (LMET) graduates.

HRMCs reported that facilitators normally take from one to two hours to adequately prepare for team building workshops of a seven hour duration. In addition, it usually takes a consultant several sessions to become adept at presenting a training module because of the heavy reliance on consultant skill that is necessary for most Navy workshops (not including TOTD). Because there is such a dependence on consultant expertise normally two facilitator's are involved in most group sessions. Since there are normally two facilitators involved in workshops, a consultant team debriefing time is needed along with intra-team building to acquaint each of the facilitators with the other's style, non-verbal cues, and personal mannerisms. The heavy reliance on facilitators also means that the consultant's style is very important for the eventual success of the training cycle. A "dependence" on consultant's skills can allow a team undergoing training to neglect developing their own skills and fall back to old habits after the consultant is no longer present to influence them.

TOTD has at the most one facilitator who takes a secondary role in the team building process. The TOTD

modules take the primary role of training the team. The facilitator can become involved if the team-building process degenerates to talking on tangents or intra-group non-productive behavior. However, as soon as the participants are back on track the facilitator once again goes into a secondary, supporting role. This means that debriefing time, inter-facilitator training, and client-consultant dependence are minimized. The most immediate savings is time. Because TOTD uses a minimum of facilitator time, TOTD can be given outside a normal HRAV period on a short-term notice. This flexibility is important for operational units which could utilize TOTD at sea away from HRMC, Ds.

Furthermore, once participants have become accustomed to the TOTD manual, they can utilize the materials in their own subgroups with even less HRMC consultant presence. It is also expected that graduates of the Navy's LMET School will be in an excellent position to utilize TOTD even more effectively (see Chapter I, Section C-4). It is recommended, however, that a facilitator be present when a unit has never gone through TOTD before. The eventual expected time savings for HRMC consultants once a Navy unit decides to utilize TOTD materials in a lower level of its management structure are enormous.

C. PROGRAMMED NATURE OF MATERIALS

Structured programs have been criticized for being too rigid and forcing teams to conform to the materials and

desired predetermined ends [Zacrison, 1976]. TOTD has not escaped such criticism as evidenced on the WES questionnaires and consultant feedback to this writer. The consultants in the field have found it necessary to restructure and modify TOTD to fit their particular unit needs and it is expected that this will probably continue in the future no matter how many times TOTD is rewritten due to the very nature of programmed structured aids [Beer, 1976].

Currently, the modules have been designed to use timely management decisions that units are experiencing and not simulations. TOTD is already somewhat flexible, but the idea is to make it even more flexible by allowing modules to stand by themselves independently. The Navy units will then have the increased ability to conduct TOTD themselves void of consultant assistance, but with the aid of the revised Facilitator's Guidelines Section and in-house LMET graduates. The manuals should continue to be written emphasizing that a team can perform TOTD without facilitators, if necessary.

For the modules to be written any less structured would allow untrained participants to venture even further off the subject at hand than was previously cited. One of the complaints was that participants could not stay on the specific step being considered. Some of the recommendations found in Appendix E involve choosing a time-keeper to remind teams on how they are doing with particular steps and an increased time for facilitator feedback at the end of each

AD-A059 602 NAVAL POSTGRADUATE SCHOOL MONTEREY CALIF F/G 5/9
EVALUATION OF PROGRAMMED TEAM DEVELOPMENT PACKAGE FOR NAVY USAG--ETC(U)
JUN 78 B Y WINSTED

UNCLASSIFIED

2 OF 2
AD
A059 602

END
DATE
FILMED
-12-78
DDC

module to focus in on inappropriate time consuming behavior that is keeping the group from proceeding to the goal that is at hand.

D. CURRENT CIVILIAN USAGE

Civilian Companies such as Sun Oil Company, Alcoa, Northern Natural Gas, Simpson Timber Company, the Bank of Montreal, and many public and private hospitals have used TOTD successfully noticing strong group cohesion and personal satisfaction following the modules. Time constraints in these groups have forced companies to do as the Navy did and combine some sessions and delete others in some situations.

It is worth noting that Sun Oil, Northern Natural Gas, and Alcoa have used TOTD with blue-collar, non-college educated individuals with no reading comprehension or application problems noted. TOTD has also been successfully utilized at hospitals with staffs that use English as a second language.

Some of the companies have successfully used independent modules alone without previous or subsequent module training. Most civilian companies do have trained internal or external consultants that sit in on the modules and assist when neccessary. Very few of the civilian firms have tried TOTD without consultants present. However, they do not recycle individuals through twice with different groups so that

the TOTD trained individual would have an opportunity to conduct the modules without a consultant.

E. SUMMARY

1. Task Oriented Team Development (TOTD) has the potential of becoming a cost effective team development program based upon consultant time savings that should be considered for Navy procurement with the noted changes incorporated (see Appendixes).

2. TOTD is a theoretically sound team building program. TOTD utilizes techniques that are currently being used in the most recently published (1977) group facilitator manuals and workbooks [Dyer, 1977; Merry and Allerhand, 1977].

3. At present TOTD takes approximately one-half the facilitator or consultant time per hour of presentation time that is being currently used with other HRMC team building programs. Additionally, there is an excellent opportunity for further facilitator time savings when commands elect to use TOTD after the top management group has gone through the program once and now has experienced participants that can present TOTD into their own sub-groups with even less outside consultant assistance. The revised "Facilitator Guidelines Section" of the manual should be effectively used by most TOTD trained participants or LMET graduates.

4. Statistical results from Navy and Coast Guard Teams going through TOTD have shown significant positive changes

especially in the areas of cooperation, cohesiveness, communication, and participation (see Chapter III). Although the TOTD time-two results were not significantly different than time-two control units results undergoing other team training programs, the time savings and flexibility should make the TOTD approach worthy of consideration.

5. TOTD in its present eight module form is not conducive for wide-scale Navy or HRMC acceptance. The TOTD manual must be rewritten in the same basic modular format but with only four modules. This will allow Navy units not to tie up key people for eight separate meetings over three to four weeks but instead allow a Navy unit to complete TOTD with four meetings in two weeks. This revised manual should be re-tested at HRMCs using control groups before fleet-wide introduction and mass printing.

6. Each revised TOTD module should be written to be independent from the other modules in so far as a command can go directly to a module if time contraints do not allow it to complete the four module program. This added flexibility will give units an opportunity to proceed directly to their particular area of concern without dedicating a large amount of time to work up to that specific point.

7. TOTD should be usable to the third level of most Navy Organizations or down to the leading petty officer level. The target population for a unit that has not

experienced TOTD should be the top management group (Commanding Officer, Executive Officer, and Department Heads for instance). After this group has finished the four modules, the participants can introduce all or part of the program to their own subgroups with or without facilitator assistance.

8. Overall, TOTD offers the Navy a timely structured team development program that can flexibly adjust to a ship being at sea or in port with or without outside HRMC consultant assistance. Once the civilian examples and the eight module design are modified to a Navy-oriented four module program the team development should prove to be a valuable team development training aid that HRMC, Ds and commands will find beneficial.

APPENDIX A

RECOMMENDATIONS FOR MODIFICATIONS OF TASK ORIENTED TEAM DEVELOPMENT: HUMAN RESOURCES MANAGEMENT CENTER INSTRUCTIONS

This appendix is a recommended appendum to the TOTD manual for Human Resources Management Centers (HRMCs) use only. It is needed because: (a) HRMCs should control the usage of TOTD in the fleet, (b) HRMCs have the consultant expertise to facilitate TOTD in Navy units, and (c) HRMCs have necessary experience and skills to modify and amend TOTD as they see practicable. The suggestions presented for incorporation in this appendum were arrived at by the writer and consultants in the field during the test implementation into fleet units during 1977-78. Chapters and sections of this thesis will be referred to for amplifying information.

A. WHEN TO USE TOTD IN A NAVY COMMAND:

TOTD should not be used in all situations where it appears that the team under consideration might have a problem. Several questions should be asked before the HRMC consultant is reasonably certain that TOTD is to be considered.

1. Does an interdependent team exist? (See "Introduction" in the TOTD manual and Chapter I, Section B1 and B2 in this thesis.)

2. Does the team "hurt" or see the need for team development? And even more important, does the leader see the need? Although Module One in the TOTD Manual will help point out specific weak areas, the consultant should have an idea just why the team might need team training. (Chapter I, Section F-2 of this thesis.)

3. What are some indicators that team development is needed? HRM survey data can be studied for the specific group under consideration. The consultant's own observations and the stated concerns of the team under consideration can also be an indicator.

4. Is the senior person present (team leader) amenable to directed participative management in the functioning of the team? Is the leader of the team open for critical feedback from his subordinates on how the team is functioning? If not the consultant might consider another team development package or perhaps just the module on goal setting (revised Module 4) (See Chapter I, Section F-2 in this thesis.)

5. Does the team have enough time to consider team development or does their operating schedule clearly preclude the setting aside of large segments of time for key personnel? This should be carefully considered but not used as the catch-all excuse for never being able to do anything.

B. HOW TO PRESENT TOTD MANUAL TO NAVY UNITS:

After the above questions have been considered the consultant should present TOTD as a training alternative to the leader of the prospective team. TOTD manuals should be left with the leader and perhaps his key assistant (Executive Officer or Chief of Staff) for their study. The following procedures should be considered when TOTD is presented to a unit.

1. The top management group (department heads, staff, etc.) should be the first group to go through the TOTD process in the command. The reasons for this are: (a) the overall mission or goals of a command as reviewed by TOTD should be well understood by all before lower level groups

attempt to define their own objectives on how to support the commands overall goals; (b) the top managers of a command should be totally aware of the new skills in role negotiation, communications, decision making, and objectives attainment before their subordinates; and (c) a "waterfall" effect would take place following the top team's completion of TOTD as they explained the attributes of the program to their subordinates.

2. The initial presentation of TOTD should be to the leader and perhaps his key assistant. The consultant should explain the basic concepts of TOTD (see "Introduction" of TOTD manual and Chapter I, Section G of this thesis). Only the first module should be considered at the meeting, but the Commanding Officer should be advised of the total time involved if all modules are taken. Module One of the TOTD should be explained as the diagnostic model which allows the leader an opportunity to see how badly his team might need team development and if he is comfortable with the style of the manual.

3. The presentation of TOTD to the leader should also include the differences between effective and ineffective teams (see Chapter I, Section E of this thesis). This might further motivate the leader to consider team development.

4. Also during the initial presentation the role of a facilitator should be discussed. It is recommended that most if not all the modules for the first team experiencing TOTD in a command be facilitated. The reasons, many of which will be discussed in Appendix C of this thesis, are that the patterns formed by the first group can be modeled when these members of the first group conduct team development training with their own sub-groups. It was found in field studies that units that had not had experience with a programmed form of team training benefited greatly by having a facilitator sit in on most of the modules.

Navy units that have LMET graduates may very well have many of the requisite skills needed for successful implementation of the TOTD program without facilitator involvement. If many of the members have such training, the consultant might advise the unit's Commanding Officer that the facilitator's section of the TOTD manual does have the required information needed for conducting the modules with internal resources. Even in the most ideal situation with LMET graduates abounding among the group considering TOTD, it is recommended that a facilitator sit in on revised Modules One and Four (see Chapter I, Section F-4 and Chapter IV of this thesis) the first time a command conducts TOTD.

5. A "straw man" memorandum should be left with the Commanding Officer that will indicate to the prospective participants what TOTD is and what prework is necessary for the first module.

C. CONCLUSION:

Task Oriented Team Development is much greater than just a set of modules that a unit must proceed lockstep through in order to develop its full potential. TOTD should be looked upon as a technology where each of the modules can stand alone and be used alone or in the prescribed order if conditions warrant such a usage. Consultants must be sensitive to the team development needs of the particular organization before a program like TOTD is considered. A unit undergoing TOTD must have some time available for the four modules and the pre-work involved with each module. The pre-work is so important for the successful outcomes of each module that a memo from the leader clearly outlying the duties of the participants before the first module and third module is recommended. The revised "Facilitator Section" of the TOTD manual is an excellent resource for the HRMC consultant and the consultant should be very familiar with it prior to facilitating TOTD in a Navy unit. HRMCs should utilize revised Module Four as a follow-up exercise from six months to a year following the completion of TOTD. A separate "Introduction" section should accompany such a module.

APPENDIX B

RECOMMENDATIONS FOR MODIFICATIONS OF TASK ORIENTED TEAM DEVELOPMENT: INTRODUCTION SECTION

This appendix recommends changes for the TOTD manual "Introduction" Section. The primary changes deal with putting as much of the terminology and civilian examples in a Navy format, reducing the number of modules from eight to four, and structuring the modules so that a Navy unit has options available to it for full scale implementation or a partial package (one, two, or three modules). The changes reflect the three strongest criticisms of TOTD found in field studies. The three criticisms were: (a) its civilian format, (b) its length (time involvement in finishing the program), and (c) its rigidity (lock-step pattern or only one way approach to the program).

In order to properly identify the specific paragraphs and sentences that changes are recommended, the following format will be followed. The page number of the TOTD "Introduction" section will be first, followed by the section letter and paragraph number. The current TOTD sentence will be written followed by the proposed new sentence.

1. Page 2; I, first sentence; presently reads: "As a manager, leader, or member of a work group . . .;" change to read: "As a Commanding Officer, Department Head, leading petty officer or work group member. . . ."

2. Page 3; section A; diagram presently reads: "Law Office, Group of Assembly Line Workers, Surgical Teams, Football teams, Interdisciplinary Group;" change to read: "Judge Advocate Office, Fleet Repair Construction Workers, Medical Surgical Team, Patrol Plane Flight Crew, Management Policy Groups."

3. Page 3; bottom footnote; presently reads: "e.g. the "top team" of a corporation: President and his Vice Presidents . . . ;" change to read: "e.g. the "top team" of a Navy unit: the Commanding Officer, Executive Officer, and Department Heads."

4. Page 4; section D, in second paragraph, second sentences presently reads: "(like a periodic lubrication of a car);" change to read: "(like a PMS or PMI inspection)."

5. Page 7; section B; second paragraph; presently reads: "The total program . . . . It is recommended . . . ;" change to read: "The total program can involve four half-day sessions (modules). The four hour modules will require from one to one-and-a-half hours of preparation. It is recommended that these sessions occur during the afternoon, between 1230 and 1630, interruptions must be kept to a minimum. It is further recommended that the sessions be spaced from three days to seven days apart."

6. Page 8; section B-4, "Instrumentation;" add two sentences between the first and second sentences: "It is recommended that a facilitator from the Human Resources Management Center (HRMC) be present during the first TOTD cycle at a command to insure proper procedural adherence. Subsequent TOTD training if led by a member that has previously gone through the training need not have a facilitator present." The rest of paragraph four reads the same.

7. Page 8; section C; this entire section will be dropped as it presently reads and made to read as follows:

PHASE ONE: DIAGNOSTIC AND TEAM DEVELOPMENT

Module One: "Do We Want Team Development?" and "What Are We Doing?"

Given that all teams "ought to have team development because of task interdependence," this module is designed to help individual team members collect information to see if the leader feels a "need" to do it and also to give the team a feel for what it is like to use these particular materials. The team, further, checks to see in fact, everybody understands why they have to

work together and what is their general mission or reason for being. It is the accomplishment of this mission that the subsequent modules are directed.

PHASE TWO: DEVELOPING SKILLS AND AWARENESS

Module Two: "Who Does What Around Here?"-Role Negotiation and Definition

Team members share their role expectations of each other for on the job performance. The team then learns and uses a set of negotiating and problem-solving procedures for resolving conflicts that arise between team member's expectations of each other. Team members, then, engage in a process of clarifying the role expectations others have for them, identifying areas of conflict and resolving these conflicts through role negotiation leading to a set of "written contracts" which helps the team decide "who is to do what" on the team.

Module Three: "How Decisions Get Made Around Here" and "How We Function As A Group"

The team examines how decisions ought to be made and works to change certain important decisions effecting the mission so they will be made in the most effective manner in the future. The team then, develops skills at recognizing and developing leadership and membership behaviors that lead to more effective decision making meetings.

Module Four: "A Team Doing What?"-Revisited: Defining Future Objectives Optional: "What It Feels To Work Around Here"-Norms

The team has an option of examining general behavior and assumptions which tend to result in "energy drains." They learn ways to improve the "work place" to make it more satisfying and productive.

Finally, the team uses all of its skills learned previously to recheck their mission and set specific performance goals to accomplish their mission. They plan to carry out on-going maintenance, performance evaluation, and development.

APPENDIX C

RECOMMENDATIONS FOR MODIFICATIONS OF TASK ORIENTED TEAM DEVELOPMENT: GUIDELINES AND TEAM LEADER SECTIONS

This appendix recommends changes to the "Guidelines" and "Team Leader" sections. Special emphasis is once again placed upon changing as much of the language from a largely civilian example to a Navy one. The same outline for proposed changes used in Appendix B will be used here.

A. GUIDELINES SECTION

1. Page 2; section A, first paragraph, first sentence; presently reads: "Eight three hour blocks . . ." change to read: "Four four-hour blocks . . . ."

2. Page 2; section A, first paragraph, last sentence; presently reads: "Whenever possible, sessions should be scheduled on company time." Change to read: "Whenever possible, sessions should be scheduled during 'working hours,' because the emphasis of TOTD is to integrate it as part of normal working habits."

3. Page 2; section C, sub-paragraph 3; presently reads: "Each team member should be reminded to read the Introduction, Gudelines for Users, and Module One (Do You Want Team Development?) . . . ;" change to read: "Each team . . . and Module One (Do You Want Team Development? and What Are We Doing?) . . . ."

4. Page 3; section II, first sentence; presently reads: "Each of the modules (Modules One through Eight) is . . . ;" change to read: "Each of the Modules (Modules One through Four) is . . . ."

5. Page 4; section E, sub-paragraph 3, add following sentence: "A facilitator's presence will provide a productive feedback critique, often picking up behaviors that the team will miss."

6. Page 5; section A, add second paragraph to read: "In certain situations where time is the main factor with the monitoring of a Human Resources Management Specialist it is possible to complete less than four modules. The leader of the team and the facilitator could choose a combination of modules that best fit the command's needs.

7. Page 6; section B, add sentence: "This step is a key learning feedback part of each module."

8. Page 6; section C, sub-paragraph 1, second sentence; presently reads: "The time required will vary between 30 to 60 minutes . . . ;" change to read: "The time required will vary between 60 to 90 minutes . . . ."

9. Page 7; second paragraph; presently reads: "Module Two deals with developing an agreed upon Core Mission Statement;" change to read: "Module Two deals with using a Role Negotiation model . . . ."

B. TEAM LEADER

1. Page 8; section I, first sentence, presently reads: "The formal leader or head of a group which is going to use this program has several unique responsibilities." Change to read: "The senior person present or supervisor who is going to use this program has ultimate responsibility for the group."

2. Page 8; section II, first paragraph, first sentence; presently reads: "As formal leader, the responsibility to schedule the time (and space) required to do this program will undoubtedly fall upon you." Change to read: "As the senior man present . . . ."

3. Page 8; section II, first paragraph, second sentence presently reads: "Part of this is mechanical . . . setting aside three hours for each of the eight sessions." Change to read: "Part of this mechanical . . . setting aside four hours for each of the four sessions."

4. Page; section III, first paragraph add two sentences: "If the unit is going through TOTD for the first time, and none of the participants have been through TOTD before, it is strongly recommended that a facilitator from one of Navy's Human Resources Management Centers be present. In subsequent sessions internal resources can be utilized.

5. Add on final page of "Team Leaders" Section: Commanding Officers or the senior person-in-charge may want to consider conducting TOTD without a facilitator if one or

more of the participants have gone through TOTD before or if some of the members of the team are LMET graduates. The "Facilitator Section" should be studied thoroughly by the individual who is considering not to have consultants present.

6. An example of a "strawman" memorandum for participants of TOTD follows:

From: Commanding Officer
To: Distribution List
Subj: Task Oriented Team Development (TOTD)

1. On _____ 19__ the Executive Officer, Department Heads, and _____ will meet to conduct team training using TOTD materials. Attendance is mandatory, all expected absentees contact _____ before _____.

2. Each participant will have in his possession one manual and will have read the Introduction Section and Module One. All participants will have completed the questionnaire on page __ of Module One and a Command Goals Statement on page __.

Signature

APPENDIX D

RECOMMENDATIONS FOR MODIFICATIONS OF TASK ORIENTED TEAM DEVELOPMENT: FACILITATOR SECTION

This appendix addresses the revised 1977, 43 page Facilitator's Section as published by Situations Management Systems, Incorporated and written by Dr. Irv Rubin and his associates. The new "Facilitator's Section is substantially more detailed than in the original 1975 TOTD Manual. The updated version is considered by far more valuable to the HRMC consultant than the original section.

The first thirteen pages of the revision are basically correct and appropriate for Navy-wide usage with the same exceptions found in the "Introduction and Guidelines" Sections, as addressed in Appendixes B and C of this thesis. Some specifics are listed below.

1. On page four the phases and modules presented should reflect the changes in Appendix B section 6 of this thesis.

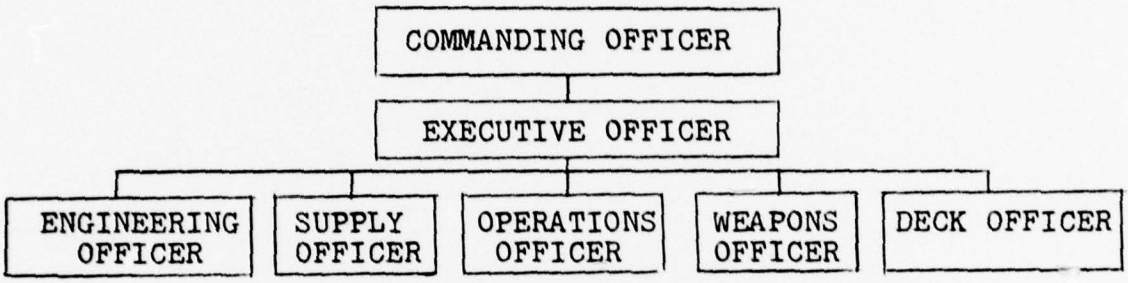
2. Any references that reflect a civilian bias or a eight module-3 hour format should be changed to a four module-4 hour format.

3. From the fourteenth page through the forty-third page a full case example is studied in detail through eight modules. It is recommended that this case example be changed from a civilian construction case to a Navy ship example. The "Case Background" on page 14 might read:

> The USS FIREPOWER is a Spruance-class destroyer. The ship is attached to a destroyer squadron and deploys to the Pacific Ocean. The Commanding Officer is a hard-charging, tough-minded, exacting

person not noted for his human relations orientation. During a recent Human Resources Availability (HRAV) the HRM Survey data indicated that his department heads responded significantly below fleet and ship-type averages in indices concerning team emphasis, work facilitation and goal integration. Consequently, the Commanding Officer was very supportive of a team development program (TOTD) when it was offered to him at the end of the HRAV.

The USS FIREPOWER's organization structure reflects a Navy Ship Organization Diagram:



The Department Heads meet daily as a group with the Executive Officer normally presiding. While in port the Commanding Officer attempts to attend the meetings. The ship is having a final short inport period before a final pre-deployment work-up.

The remainder of the "Facilitator" Section example should reflect to the closest extent possible a four module Navy set-up (as outlined in Appendix E). Much of the present style presented in the revised "Facilitator" Section should remain.

4. The newly rewritten "Facilitator Guidelines" Section uses the term "crunch point" to describe points in the modules where there is normally a problem of interpretation. This should be maintained along with the "facilitator responses" that are incorporated in the revised edition.

5. It is felt that rather than this writer completely rewrite this section and the modules section of the TOTD Manual, the Bureau of the Navy Personnel (PERS 62) should contract with the authors to do the actual detailed work. Dr. Rubin's experience with the TOTD Manual would make the rewrite process more consistent with the TOTD assumptions in team development. PERS 62 should monitor the rewriting process insuring that Navy-identity and authenticity are maintained.

6. As a final comment the "Facilitator" Section should not be incorporated into every TOTD Manual. Only those manuals that the HRMCs use directly or manuals that individual units are using in implementing TOTD without a consultant or with a minimum of consultant interface should have the Facilitator Section incorporated into it. The reason is that such reading by the participant will give him additional information that the participant does not necessarily need and allow the participant to play a "devil's advocate" or "gaming" roles with the participant armed with the very information and responses that a facilitator would use to minimize such behaviors.

APPENDIX E

RECOMMENDATIONS FOR MODIFICATIONS OF TASK ORIENTED TEAM DEVELOPMENT: MODULES

Replies to the open-ended Workshop Evaluation System Forms criticized the eight TOTD Modules for being: (a) too long or time consuming, (b) civilian oriented, (c) somewhat repetitive or redundent in parts, and (d) too rigid or structured pattern for all teams to follow. Complaints were also received stating that many participants were not prepared for several of the modules and that some of the material in the modules was too basic or simplistic for "Executive (officer) Management Teams." These concerns are addressed in the revised Modules One through Four.

The most common reason given resulting in only a small number of commands participating in TOTD is that the dedicated time necessary to devote to team development was too great. Often Commanding Officers felt that team development was indeed needed but felt that their operating schedule would not allow them to devote such a large section of time to TOTD (two sessions a week for four weeks not including the pre-work). It is important to note that only one of the Navy or Coast Guard teams involved in the TOTD program completed all eight modules. The average number of modules completed was four to five modules. Modules were combined and dropped. Even in the above cases many of the units

were hard-pressed to finish the abbreviated program. Therefore, in order for TOTD to be at all responsive to fleet needs it is strongly recommended that the modules be combined together in a manner that will be discussed in the appendix. The revised TOTD program would have four modules, each of approximately four hours in duration. This will allow a unit to finish TOTD in two weeks with two modules a week. Further, the entire manual needs to have a Navy format with all examples and stories reflecting a military bias.

This appendix will then outline basically what the four revised modules should eventually look like. The revised module set-up incorporates recommendations from the HRMCs and this writer's experience with the program as tested in the field. This appendix will not go into exacting detail for this is considered to be a job to be done by the original authors of the manual so that continuity and general theoretical design of TOTD can be maintained. The Navy (PERS 62) should contract with Dr. Rubin and his associates to adapt this manual into a streamlined four module, Navy package.

The format for this appendix is to present each of the proposed revised modules. The identical structural approach used in the original TOTD Manual will be maintained. This would mean that the "Outcomes, Pre-Meeting Preparation, Overviews of Major Activites, Introduction, Specific Steps in Team Building, and Team Meeting" formats be unchanged. So as not to confuse the original modules with the proposed revised modules, each module mentioned will be identified

with an "(o)" for original or present module (current 8 module design) and a "(r)" for the revised module (4 module design recommended for Navy usage).

A. REVISED MODULE ONE

The (o) Module One was well received by all units and can be used as is. Theoretically, the need for a pre-work questionnaire identifying team strengths and problem areas is a well documented team building characteristic [Dyer, 1977; Merry and Allerhand, 1977]. A needed emphasis should be around guaranteeing that prework is in fact complete. If the revised module to be completed in the 4 hour time period, the questionnaire and team goals statement must be completed beforehand. A pre-meeting memorandum accompanying the materials for the participants is appropriate.

In order for (o) Module Two to be properly included in the revised module, basic content changes in the "Outcomes Section," "Overviews of Major Activities" and "Introduction" Sections of the module should occur. These basic changes will be necessary in each of the proposed new modules. These basic changes will be necessary in each of the proposed new modules. These changes must allow the combination of the original modules to appear normal and not contrived. The original modules will now be reviewed step by step, recommending changes to streamline and adapt this originally two module sequence into one.

1. The first clear departure from (o) Module One comes on Page 19 when the "Specific Steps in Upcoming Team Meeting" are listed. Steps six through eight are recommended to be dropped. Step one of (o) Module Two should begin after step 5 of (o) Module One. The reasons for dropping these four steps are:

a. In a typical Navy scenario the decision to devote the time necessary for TOTD is a command decision the Commanding Officer or senior person present should make. It is recommended that the formal leader of the group consult with the HRMC consultant and perhaps the number 2 man in the group (Executive Officer, etc.) to make such an important decision after the (r) Module One is completed. Some Commanding Officers may want the group to make the decision. If this is the case the facilitator should honor that decision.

b. The team's current weaknesses in communications, problem solving, and interpersonal group norms could possibly preclude the team from making the correct choice on whether or not to proceed.

c. Critiquing the module can now be accomplished at the end of (o) Module Two.

2. During Step 1 on page 20 of (o) Module One a person should be assigned as a time keeper. This should be done in every module to guarantee the team does not get bogged down in certain steps or off on time-consuming tangents. The facilitator could be easily designated as the time keeper although it should be stressed that all participants are in a way a time keeper for this time constrain-training package.

3. After step 3 on page 22 of (o) Module One a 10 minute break should be called.

4. The transition from step 5 of (o) Module One to step 1 of (o) Module Two should be enhanced by a transition statement in the (r) step 5 of (r) Module One. Each step of (o) Module Two will be a new step for (r) Module One. The final step on page 12 of (o) Module Two should be 30 minutes instead of the 15 minutes allotted and incorporate within it a paragraph having each individual state whether or not the team should devote more time to TOTD. The Commanding Officer (or senior person present) should go last or defer his decision until after the meeting. The last step of the (r) Module One should also have a section devoted to the facilitator where he can add comments on the processes observed. The facilitator is a third eye to the group and can offer insights and observations that the team might not notice because of norms the team has developed over time.

5. The "Introduction" Section to (o) Module Two can be largely eliminated. The second paragraph on page 5 of (o) Module Two should have a military example. The "car scenario" presented on pages 3, 4, 5, and 6 should be dropped. The middle paragraphs on page 6 of (o) Module Two should be maintained with a third paragraph added. The paragraph should state that every Navy team has an official assigned reason for being by a higher authority. But, the paragraph should state, often this assigned "reason for being" is not completely understood or accepted by the group. This module also allows the team to state unique goals not outlined by higher authority (such as retention rates, aircraft availability, etc.). Another critical question addressed by the paragraph should be the team's particular responsibility and purpose for meeting the unit's goals. The remainder of the "Introduction" Section of (o) Module Two should be maintained and incorporated with the "Introduction Section" of (o) Module One.

B. REVISED MODULE TWO

The Role Definition and Negotiation Modules in the original manual were well received in most Navy units with many teams saying that it was the high point of the TOTD program. However, it is worth noting that four of the five teams going through the TOTD program took both of the modules together. The question becomes what is the best way to combine the modules. An important outcome of the module for some of the teams was a scheduled time outside the normal module periods without the Commanding Officer or Executive Officer (seniors) present where team members were able to share amongst each other without the fear of putting each other on "report." The negotiations model learned in (o) Module Three was used during these meetings. HRMC Pearl Harbor combined the modules, but left out most of the individual role negotiations in Module Three and concentrated on

the group negotiation in Module Four, with active facilitator direction. This writer recommends an approach that concentrates on Module Four but allows for individual or small group negotiation outside the group session. Written contracts should be made optional.

1. The "Introduction" Sections of (o) Module Three and Four should be combined leaving out any duplication. The story on page 4 and 5 of (o) Module Three can be dropped and a military, Navy slanted introduction put in its place. The Navy story could mention for instance that although jobs and responsibilities are relatively well defined in a military organization, there are "gray areas" that overlap and are not specific as to who should do what and when. There are also circumstances where team members believe other team members are doing their job or some members are having to do the job of others. An example could be made using a Navy example. The stick-diagrammed story that is presently in the manual adds to the perception and criticism of the program being too simplistic or basic and therefore should be dropped.

2. Step 1 on page 12 of (o) Module Three should remain the same. Steps 2 through 8 of (o) Module Three can be left out and step 2 of the (r) Module Two would have a 10 minute session where each participant would make sure he understands the messages given to him. Step 3 would be the completion of the Role Message Response Sheet found on page 6 of (o) Module Four. About 30 minutes should be taken for each participant to put down his information given to him on a worksheet plainly with a magic marker and posting it. Step 4 would be a 15 minute step where all participants would become acquainted with the individual response sheets. Step 5 would have one member share his response sheet form. It should be remembered that several people might be affected on a given decision. Step 6 would then be the scheduling of needed negotiations. This should be accomplished if the points cannot be resolved in group negotiation. If private sessions are scheduled, the process used in (o) Module Three should be followed. As each individual goes through the lists discussing problems brought up and resolved, a separate recorder should guarantee that agreements are listed and some issues that impact heavily on other individual's sheets be noted. By devoting most of this module to the group negotiation process rather than the individually oriented (o) Module Three Negotiation Model, most of the time the group spends together can be towards concentrating on group issues and not individual inconsistencies. The individual issues can and should be scheduled at another time

without the entire team present. This revised module is largely an expanded (o) Module Four except with the additional time all participants should be able to "report out" on their own "response sheets." The last step would be a general critique with a facilitator input.

C. REVISED MODULE THREE

This revised module will combine the original (o) Modules Five and Six together. Most of the field studies indicated that these modules ran comparatively quickly and should easily fit into a four hour time slot if the participants are kept to the task. The decision model in (o) Module Five was well received by most units.

Many of the participants came unprepared for these modules in the field studies. Therefore, it is suggested that the senior man in the group prepare and distribute a memorandum to the participants a few days prior to the combined, revised module. The memorandum could contain progress to date (perhaps the teams mission statement agreed to in (r) Module One), but most important the memorandum must emphasize the need for preparation and prework accomplishment. If the facilitator or leader is fairly certain that the necessary reading has not been accomplished, then the first 15 to 20 minutes of the (r) Module Three should be devoted to reading the "Introduction" and preparing a "quality" decision for the group's consideration. The choice of the "example" decision in (o) Module Five is the key to the success of the decision-making part of the module. Transition paragraphs in the "Introduction" Section and "Summary" Page are necessary for the two (o) Modules Five and Six to flow together.

1. The "Outcomes" Section and "Pre-Meeting Preparation" should reflect both (o) Modules Five and Six. In the "Overview of Major Activities" the flowchart should leave off the group reviews and critiques on page 3 of (o) Module Five and put in its place the overview of (o) Module Six.

2. The "Introduction" Section must blend the two modules together as one. In the (o) Module Five, page 6, the example of the personnel department considering a training program should be changed to a military example. The remainder of the "Introduction" is appropriate. The transition paragraph on page 9 of (o) Module Five could read something like:

> To enhance the decision-making process by seeing to the accomplishment of the decisions made, and utilize all group member's resources to the utmost, the team must examine the leadership and controlling roles of the group.

3. The specific steps of (o) Module Five can remain basically as they are with the minor modification of lessening the time in step 4 on page 12 of (o) Module Five to 30 minutes maximum and eliminating the critique step 7 until the end of the entire revised module. Most groups are able to proceed quickly through these steps if (o) Module Three and Four ((r) Module Two) have been completed and the scheduled negotiation meetings from (r) Module Two have indeed taken place. Step 7 of (o) Module Six now becomes step 13 of the (r) Module Three.

4. The rewrite of (r) Module Three should change the example on page 15 of (o) Module Five from civilian characters to a Navy example. The Personnel Manager can easily become the Commanding Officer with the Assistant Personnel Manager the Executive Officer and so on. The decision charting process is an effective and theoretically sound one [Vroom, 1972] and should be used as is in the original module.

D. REVISED MODULE FOUR

The revised Module Four will concentrate primarily on (o) Module Eight, while (o) Module Seven will be made largely optional. The reading and completing of "Examples of Norms on This Team" in (o) Module Seven is encouraged. The first

part of the (r) Module Four can review quickly the "Norms Sheet" and move on to (o) Module Eight.

The reasons (o) Module Seven is being deemphasized are: (a) most teams by the time they reach this point in the TOTD process have dealt with the issues dealing with supportive relationships, recognition, and cohesiveness that (o) Module Seven stresses; (b) most of the teams chose to pass over Module Seven anyway; (c) it is felt that the primary emphasis of this module should be on the future objectives and problem solving sections of (o) Module Eight. The (o) Module Seven should remain in its entirety in the manual, but as an optional sequence, the decision to take (o) Module Seven and Eight in their entirety is available and would make an excellent combination of exercises for a team to go through 6 months to a year after TOTD training has been completed as a review and update.

Once again prework preparation is essential to make this revised module work effectively. The performance goals in (o) Module Eight must be listed specifically, with "evidence" statements clearly written.

1. The "Overview and Introduction" of (o) Module Seven, pages 3-7, should reflect the fact that most of the (o) Module Seven is optional. However, the reading of the "Introduction" and the filling out of the "Examples of Norms" on page 8 of (o) Module Seven is strongly recommended for inclusion into the revised Module Four.

2. The first two steps of (o) Module Seven as listed on page 9 should be retained as part of the normal sequence in the (r) Module Four. This will insure that the team has reviewed their norms and can decide in step 2 if there are certain issues that need to be confronted. The remaining 5 steps should be listed, however, both in "Specific Steps

in Team Building" Section and the "Team Meeting" Section. Step 2 on page 10 of the "Team Meeting" Section of (o) Module Seven should be increased to 30 minutes if the remaining steps are not taken to insure proper discussion time.

3. Step 1 of (o) Module Eight now becomes step 3 of the (r) Module Four. The "Introduction" Section of the (r) Module Four must specifically separate the "Norms" part of the module and the "Goals and Objectives" part. This would insure that the participants understand that the primary emphasis of (r) Module Four is in "Goal Setting and Objectives."

4. One of the major revisions recommended for (o) Module Eight involves step 4 on page 11 of (o) Module Eight. A "force field analysis" (see Chapter I, Section G3 of this thesis) should be introduced at this time around the particular part of the core mission identified. Such an addition would enhance the team's recognition of the forces that are driving the particular objective to its projected or desired outcome and the forces (or issues) that are restraining the objective from being completed. A quick explanation, not taking over one page, could illustrate what a "force field analysis" is as part of this step. HRMCs that have incorporated this into this module have seen the teams in training experience a broader knowledge and perception of the specific part of the core mission the team is studying.

5. Step 10 located on page 17 of (o) Module Eight will become step 12 in the revised Module Four and concerns the critique of the entire program. In order to have a numerical display of how far the team has progressed over the term of TOTD it is recommended that the team retake the questionnaire found on page 6 of (o) Module One. The "Example" sections of each question should not be a part of the questionnaire. The questionnaire should be incorporated as part of (r) Module Four, step 12.

6. In addition to the above step it is recommended that a Workshop Evaluation Scale (WES) be administered as the last specific action in the module after all discussion has taken place (see Chapter II, Section D). The WES instrument asks specific questions about TOTD, WES also has open-ended questions that can reflect individual participant criticisms and praise. This instrument does have a normative scale, although the nationwide scale norms reflect more of a conference type workshop than a longer term team training program. The WES questionnaire is only a suggestion for there are many other measurement instruments that would do the job. The final forms should be anonymously filled out and sent to the HRMC coordinating the TOTD program for that particular unit to insure TOTD updating and modification.

7. In the summary Section on page 17 of (o) Module Eight, a paragraph should be added explaining the possibility of utilizing TOTD in each of the participant's sub-groups that they supervise. For instance if TOTD was first introduced on a Navy ship to the Department Head Group, the program should now be considered in each of the participant's own departments. As stated in Appendix B it is possible to use TOTD in parts or as a complete four module set. If any of the pafticipants are interested within their respective sub-groups of using TOTD they should talk with the facilitator or HRMC following (r) Module Eight and obtain a "Guidelines for Facilitators."

APPENDIX F

FORCED CHOICE QUESTIONNAIRE

METHODOLOGY EVALUATION

ORGANIZATION	TITLE	PERIOD OF REPORT	DATE OF REPORT

A. Duties actually performed on present team

B. THIS TEAM (is) — MAKE ONE MARK IN EACH COLUMN FOR EACH SET OF ITEMS

	MOST	LEAST		MOST	LEAST		MOST	LEAST
a. Works better together.	X		a. Lacks ability to inspire confidence.		X	a. Militarily correct.	X	
b. Extremely rank conscious.		X	b. Easy going.	X		b. Normally cheerful.	X	
c. Thinks only of themselves		X	c. What everyone looks for in a friend.		X	c. Can't take criticism.		X
d. Worries a great deal		X	d. Has a quiet & dignified bearing.	X		d. Doesn't get along with people.		X
a. Lacks aggressiveness.		X	a. Hot tempered.		X	a. Modest & reserved.	X	
b. Fire but not overbearing.	X		b. Fails to demonstrate originality.		X	b. Commands respect.	X	
c. Egotistical.		X	c. Reserved.		X	c. Overbearing		X
d. Rubs people the wrong way		X	d. Impresses people favorably.	X		d. Indifferent.		X
a. Boastful.		X	b. Quiet, unassuming.			a. Immature		X
b. Inspires pride in organization.	X		b. Follows rather than leads.		X	b. Modest.		
c. Looks taut.		X	c. Has an attitude of superiority.	X		c. Nervous.		X
d. Thoughtful of others.		X	d. Tactful.	X		d. Competitive.	X	

C. THIS TEAM (is) — TEAM PROFICIENCY

	MOST	LEAST		MOST	LEAST		MOST	LEAST
a. Becomes dogmatic about their authority.		X	a. Fails to work for best interest of all.		X	a. Fails to support fellow cmd. members.		X
b. Careless in attention to detail.		X	b. Has a high degree of initiative.	X		b. Oversteps their authority.		X
c. Never doubts their ability.	X		c. Never makes excuses for mistakes.	X		c. Gives clear and concise directions.	X	
d. Well grounded in all phases of their mission.	X		d. Slow in accomplishing work.		X	d. Very exacting in all details.		X
a. Willing to accept responsibility	X		a. Able to communicate effectively.	X		a. Can not assume responsibility.		X
b. Criticizes unnecessarily.		X	b. Not willing to accept new ideas.		X	b. Knows how and when to delegate authority.	X	
c. Follows directions closely.	X		c. Constantly striving for new knowledge and ideas.	X		c. Offers meaningful suggestions.	X	
d. Inclined to "Goldbrick".		X	d. Low efficiency.		X	d. Too easily changes their ideas.		X
a. Doesn't listen to suggestions.		X	a. criticizes policies of superiors		X	a. Reluctant to accept responsibility.		X
b. Cool under all circumstances	X		b. Can't work with other teams		X	b. Lacks interest in their job		X
c. A go-getter that always does a good job.	X		c. If in error, will admit it.	X		c. Excellent at constructive criticism	X	
d. Can take over in an emergency.	X		d. Can be relied on for good judgement.	X		d. Hesitant about making decisions.		X
a. Represents the expressed viewpoints of his cmd.	X		a. Exhibits a conscious effort to assist people.	X		a. Willing to accept things not fully understood.	X	
b. Quick to pass judgement.		X	b. Hesitant about rendering decisions		X	b. Does not support the command.		X
c. Uses good communications procedures	X		c. Demonstrates confidence in command.	X		c. Demonstrates real concern for problem solving.	X	
d. Fits well into command structure.	X		d. Seeks recognition for accomplishments.		X	d. Does a good job.	X	

"x" marks correct answer

APPENDIX G

WORKSHOP EVALUATION SCALE

1.	Organization of TOTD was	EXCELLENT 7 6 5 4 3 2 1 POOR
2.	The objectives of TOTD were:	CLEARLY EVIDENT 7 6 5 4 3 2 1 VAGUE
3.	The TOTD Manual works as a presentor (Consultant)	EXCELLENT 7 6 5 4 3 2 1 POOR
4.	The ideas and activities presented were:	VERY INTERESTING 7 6 5 4 3 2 1 DULL
5.	The Scope (coverage) was:	VERY ADEQUATE 7 6 5 4 3 2 1 INADEQUATE
6.	My attendance at TOTD should prove	VERY BENIFICIAL 7 6 5 4 3 2 1 NO BENEFIT
7.	Overall I consider TOTD	EXCELLENT 7 6 5 4 3 2 1 POOR
8.	Do you feel a need for additional information	YES NO

OPEN-ENDED QUESTIONS

The stronger features of TOTD were:

The weaker features were:

GENERAL COMMENTS:

APPENDIX H

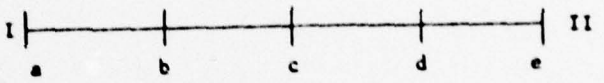
TASK ORIENTED TEAM DEVELOPMENT QUESTIONNAIRE

MODULE ONE

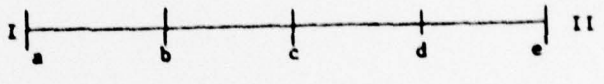
INDIVIDUAL DATA SUMMARY SHEET

Scale

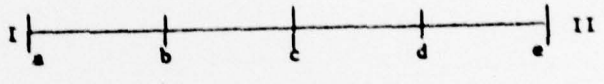
1. Goal Clarity and Conflict



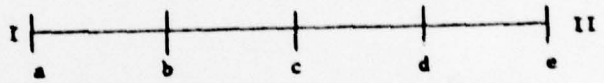
2. Role Clarity



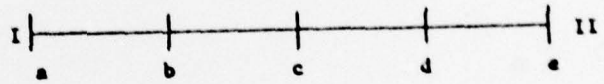
3. Role Conflict



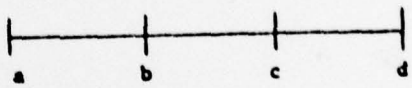
4. Participation / Influence



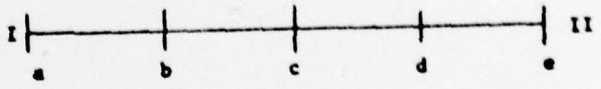
5. Meeting Effectiveness/Follow-Up



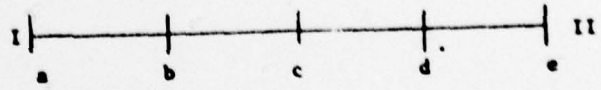
6. Conflict Management



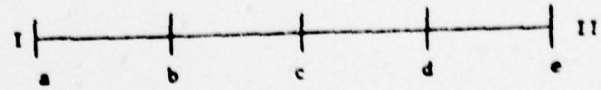
7. Recognition/ Involvement



8. Support/ Cohesiveness



9. Energy



APPENDIX I

RESULTS OF FORCED CHOICE QUESTIONNAIRE, TIME ONE AND TIME TWO TOTD AND CONTROL GROUPS

A. TASK ORIENTED TEAM DEVELOPMENT (TOTD) (See Table 3, part A1)

1. Percentage Correct From 21 Tetrads (15 Respondents)

	TIME 1			TIME 2	
Q	MOST	LEAST	Q	MOST	LEAST
1	46.7%	100%	1	100%	100%
2	33	73	2	80	100
3	67	67	3	93	100
4	67	47	4	93	60
5	40	60	5	73	100
6	67	67	6	80	87
7	80	73	7	93	93
8	47	60	8	87	60
9	53	80	9	87	80
10	33	60	10	93	100
11	67	67	11	100	67
12	80	60	12	100	93
13	80	33	13	100	80
14	47	54	14	73	93
15	47	47	15	87	100
16	73	80	16	93	100
17	67	27	17	73	60
18	33	87	18	67	100
19	67	53	19	87	80
20	40	60	20	93	93
21	93	67	21	100	80

SAMPLE MEAN FOR MOST AND LEAST

T1 MEAN = 60.7% T2 MEAN = 88%

B. CONTROL GROUPS

1. Percentage Correct Answers (36 Respondents) See part A-1 of Table 3)

	TIME 1			TIME 2	
Q	MOST	LEAST	Q	MOST	LEAST
1	61%	92%	1	100%	100%
2	75	97	2	87	90
3	83	81	3	90	81
4	86	67	4	87	67
5	75	75	5	84	81
6	78	58	6	66	66
7	94	86	7	87	87
8	83	64	8	87	74
9	69	72	9	58	80
10	80	72	10	93	87
11	80	77	11	90	90
12	89	69	12	97	81
13	86	72	13	94	84
14	75	72	14	90	84
15	86	75	15	94	87
16	78	72	16	94	84
17	83	55	17	90	66
18	72	89	18	71	94
19	86	83	19	97	90
20	72	86	20	90	94
21	92	58	21	90	68

SAMPLE MEAN FOR MOST AND LEAST

T1 MEAN = 78% T2 MEAN = 88%

C. TIME TWO AGGREGATE TOTD AND CONTROL

1. Percentage Correct Answers (See part B of Table 3)

TOTD 29 Respondents			CONTROL 44 Respondents		
	TIME 2			TIME 2	
Q	MOST	LEAST	Q	MOST	LEAST
1	90%	100%	1	98%	100%
2	83	79	2	86	91
3	93	97	3	93	84
4	90	66	4	82	80
5	72	97	5	84	82
6	79	97	6	73	75
7	97	93	7	91	93
8	90	93	8	89	82
9	76	93	9	68	73
10	86	93	10	95	86
11	93	83	11	93	89
12	97	86	12	95	86
13	90	70	13	95	84
14	66	79	14	93	89
15	83	86	15	95	91
16	86	90	16	95	91
17	66	62	17	93	64
18	66	97	18	75	98
19	79	76	19	84	95
20	76	86	20	91	95
21	97	76	21	91	73

SAMPLE MEAN FOR MOST AND LEAST

T2 MEAN = 84.62% T2 MEAN = 87.14%

BIBLIOGRAPHY

1. Anderson, R. C., "Learning in Discussions: A Resume of the Authoritarian-Democratic Studies," Harvard Educational Review, 29, p. 201-215, Summer 1959.

2. Argyris, C., Intervention Theory and Method, p. 50-108, Addison-Wesley, 1970.

3. Argyris, C., Management and Organization Development: The Path Xa to Yb, p. 5-63, McGraw Hill, 1971.

4. Bales, R., "The Equilibrium Problem in Small Groups," Theory of Action, Free Press, 1953.

5. Beckhard, R., Organization Development: Strategies and Models, p. 5-45, Addison-Wesley, 1969.

6. Beer, Michael, "The Technology of Organization Development," Handbook of Industrial and Organizational Psychology, p. 550-652, 1976.

7. Bennis, W. G., Changing Organizations, p. 8-25, McGraw Hill, 1966.

8. Bennis, W. and Shepard, H., "A Theory of Group Development," Human Relations, p. 415-437, 1956.

9. Berkowitz, L., "Sharing Leadership in Small, Decision Making Group," Journal of Abnormal Psychology, p. 231-238, 1953.

10. Berkowitz, L. and Leoy, B. I., "Pride in Group Performance and Group-Task Motivation," Journal of Abnormal and Social Psychology, 53, p. 300-306, 1956.

11. Berkshire, A. and Highland, L., "Air Force Personnel Performance Evaluation," Performance Appraisal, p. 235-258, 1962.

12. Boguslaw, R. and Porter, E. H., "Team Functions and Training," Psychological Principles in System Development, Holt, Rinehart, and Winston, p. 50-85, 1962.

13. Coran, L. W., "Forced Choice: Better Than Other Rating Methods," Personnel, p. 114-125, January 1959.

14. Dayal, I. and Thomas, J., "Operation KPE: Developing a New Organization," Journal of Applied Behavioral Sciences, 4, p. 473-506, October-December 1968.

15. Delbecq, A. L., Van de Ven, A. H., and Gustafson, C. B., Group Techniques for Program Planning, Scott Foresum and Company, p. 7-10, 1975.

16. Deutsch, M., "An Experimental Study of the Effects of Cooperation and Competition," Human Relations, p. 199-231, 1949.

17. Deutsch, M., "Group Behavior," International Encyclopedia of the Social Sciences, MacMillan Free Press, p. 265-276, 1968.

18. Dyer, W. G., Team Building: Issues and Alternatives, Addison-Wesley, p. 131-136.

19. Fiedler, F. E., A Theory of Leadership Effectiveness, McGraw Hill, p. 7-25, 1967.

20. Fiedler, F. E., "Personality and Situational Determinants of Leadership Effectiveness," Group Dynamics: Research and Theory, 3rd ed., Harper and Row, p. 362-380, 1968.

21. Fiedler, F. E., "Predicting the Effects of Leadership Training and Experience from the Contingency Model," Journal of Applied Psychology, 56, p. 114-119, 1972.

22. Forbes, R. L., Organization Development: An Analysis of the U. S. Navy Experience, Navy Postgraduate School, June 30, 1977.

23. Frazer, P., "Leading the Leaders," U. S. Institute of Navy Proceedings, p. 77-79, July 1977.

24. French, W. L. and Bell, C. H., Organization Development, Prentice-Hall, p. 112-122, 1973.

25. Friedlander, F., "A Comparative Study of Consulting Processes and Group Development," Journal of Applied Behavioral Science, p. 377-399, 1968.

26. Gagne, R., The Conditions of Learning, 3rd ed., Holt, Rinehart, and Winston, p. 14-16, 89-91, 1977.

27. Galbraith, J., Designing Complex Organizations, Addison-Wesley, Chapter 6, 1973.

28. Graen, G., "Role Making Process Within Complex Organizations," Handbook of Industrial and Organizational Psychology, Rand McNally, p. 1201-1203, 1976.

29. Hackman, J. R., "Group Influences on Individuals," Handbook of Industrial and Organizational Psychology, Rand McNally, p. 1520-1585, 1976.

30. Halpin, A. W. and Winer, B. J., "A Factorial Study of the Leader Behavior Descriptions," Leader Behavior: Its Descriptions and Measurements, Ohio State University, 88, p. 39-51, 1957.

31. Hare, P., "Group Decision by Concensus: Reaching Unity in the Society of Friends," Sociological Inquiry, 43, p. 77-80, 1973.

32. Hare, P., Handbook of Small Group Research, 2nd ed., Free Press, p. 3-330, 1976.

33. Harrison, R., "Role Negotiations: A Tough Minded Approach to Team Development," Interpersonal Dynamics, 3rd ed., Dorsey Press, 1973.

34. Hartkemeir, H. P., Introduction to Applied Statistical Analysis, Dickenson Publishing Company, p. 224-225 and p. 260-265, 1968.

35. Human Resources Management Center Pearl Harbor, memorandum to Bureau of Naval Personnel (PERS 62), Subject: Proposed Test Plan Evaluation of Task Oriented Team Development (TOTD), by Bibby, L. H., 4 February 1977.

36. Janowitz, M., The Professional Soldier, Free Press, 4th ed., 1971.

37. Jones, J. F., "A Model of Group Development," 1973 Annual For Group Facilitators, University Associates, p. 88-91, 1973.

38. Kahn, R. L. and Katz, D., "Leadership Practices in Relation to Productivity and Morale," Group Dynamics Research and Theory, Row and Peterson, 1953.

39. Kanarik, A. F., Alden, D. G., and Daniels, R. W., "Decision Making and Team Training in Complex Tactical Training Systems of the Future," 25th Anniversary Commemorative Technical Journal of the Naval Training Device Center, 1971.

40. Klaus, D. J. and Glaser, R., Increasing Team Proficiency Through Training: A Final Report, American Institute for Research, May 1968.

41. Klemp, G., Munger, M. T., and Spencer, L., Analysis of Leadership and Management Competencies of Commissioned Naval Officers in the Pacific and Atlantic Fleet, McBer and Company, August 12, 1977.

42. Lanzetta, J. T., "Group Behavior Under Stress," Human Relations, 8, p. 30, 1955.

43. Lawler, E. E. and Hackman, J. R., "Impact of Employee Participation in the Development of Pay Incentive Plan: A Field Experiment," Journal of Applied Psychology, p. 467-471, 1969.

44. Lewis, J. W., "Management of Team Development: Will It Work For You?" Personnel, p. 50-68, July-August 1975.

45. Lickert, R., New Patterns of Management, McGraw-Hill, p. 166-169, 1961.

46. Mager, R. F., Goal Analysis, Fearon Publishers, p. 1-45, 1972.

47. McCallon, E., Workshop Evaluation System Manual, Learning Concepts, p. 1-35, 1976.

48. McGrath, J. E., "Stress and Behavior in Organization," Handbook of Industrial and Organizational Psychology, Rand McCally, p. 1351-1396, 1976.

49. McGregor, D., The Human Side of Enterprise, McGraw-Hill, p. 232-235, 1960.

50. Merry, Uri, and Allerhand, M., Developing Teams and Organizations, Addison-Wesley, p. 173-195, 1977.

51. Miller, J. G. "Toward a General Theory For the Behavioral Sciences," American Psychologist, p. 513-531, 1955.

52. Mosteller, F. and Rourke, R. F., Sturdy Statistics: Nonparametrics and Order Statistics, Addison-Wesley, p. 89, 1973.

53. Navy Postgraduate School memorandum to Bureau of Navy Personnel, Subject: Preliminary Evaluation of Task Oriented Team Development by Gustafson, C. B. and Winsted, B. Y., January 1978.

54. Parsons, T., "An Outline of the Social System," Theories of Society, Free Press, p. 30-79, 1961.

55. Plovnick, M., Fry R. and Rubin, I., New Development in O.D. Technology: Programmed Team Development, Sloan School of Management, 1974.

56. Plovnick, M., Fry R., and Rubin, I., Task Oriented Team Development, 1975.

57. Richardson, M., "Forced Choice Rating Systems," Personnel, p. 205-212, November 1949.

58. Sarbin, T. R. and Allen, V. L., "Increasing Participation in a Natural Group Setting: A Preliminary Report," The Psychology Record, p. 1-7, 1968.

59. Schein, E. H., Process Consultation, Addison-Wesley, 1969.

60. Schutz, W. C., FIRO: A Three-Dimensional Theory of Interpersonal Behavior, Holt Rinehart, 1958.

61. Sherif, M., "Formation of Social Norms: The Experimental Paradigm," Basic Studies in Social Psychology, Rinehart and Winston, 1965.

62. Sisson, E. D., "Forced Choice-The New Army Rating," Performance Appraisal, Rinehart and Winston, p. 223-224, 1962.

63. Slater, P. E., Microcosm: Structural, Psychological and Religious Evolution in Groups, John Wiley, 1966.

64. Smith, E. E. and Knight, S. S., "Effects of Feedback on Insight and Problem-solving Efficiency in Training Groups," Journal of Applied Psychology, p. 209-211, 1959.

65. Stotland, E., "Determinants of Attraction to Groups," Journal of Social Psychology, p. 71-80, 1949.

66. System Development Corporation Technical Memorandum 2581, System Training and Research in Team Behavior, by Alexander, L. T. and Cooperband, A. S., 16 August 1965.

67. Tuckman, B. W., "Developmental Sequence in Small Groups," Psychological Bulletin, p. 384-399, 1965.

68. U. S. Army Behavioral Science Research Laboratory Technical Report 1171, Training Individual Image Interpreters Using Team Consensus Feedback, by Cockrell, J. T., June 1971.

69. U. S. Navy OPNAVINST 5300.6, Navy Human Goals Plan, by Weisner, 6 August 1973.

70. U. S. Navy OPNAVINST 5300.6, Navy Human Resource Management Support System by Shear, H. E., 10 October 1975.

71. Varney, G., Organization Development for Managers, Addison-Wesley, p. 156-165, 1977.

72. Verron, P. E., Personality Assessment: A Critical Survey, Butler and Tanner, p. 224-268, 1964.

73. Vroom, V. H. and Yetton, P. W., Leadership and Decision Making, University of Pittsburg Press, 1973.

74. Vroom, V. H., "Leadership," Handbook of Industrial and Organizational Psychology, Rand McNally, p. 1527-1551, 1976.

75. Wagner, A. B., "The Use of Process Analysis in Business Decision Games," Journal of Applied Behavioral Science, p. 387-408, 1965.

76. Zakricson, R., Measurement of Behavioral Styles, Ph.D. Thesis, University of Minnesota, 1976.

INITIAL DISTRIBUTION LIST

		No. Copies
1.	Defense Documentation Center Cameron Station Alexandria, Virginia 22314	2
2.	Library, Code 0142 Naval Postgraduate School Monterey, California 93940	2
3.	Department Chairman, Code 54 Department of Administrative Sciences Naval Postgraduate School Monterey, California 93940	1
4.	CDR C. B. Gustafson, Code 54 Department of Administrative Sciences Naval Postgraduate School Monterey, California 93940	1
5.	Dr. Ed Alden, Code 54 Department of Administrative Sciences Naval Postgraduate School Monterey, California 93940	1
6.	LT Bradley Y. Winsted USS OKINAWA(LPH-2) FPO San Francisco, California 96610	1
7.	Bureau of Naval Personnel (PERS 62) Arlington Annex Washington, D. C. 20370	1
8.	Commanding Officer Human Resources Management Center 5621-23 Tidewater Dr. Norfolk, Virginia 23509	1
9.	Commanding Officer Human Resources Management Center Naval Training Center San Diego, California 92133	1
10.	Commanding Officer Human Resources Management Center Pearl Harbor Pearl Harbor, Hawaii 96860	1
11.	Commanding Officer Human Resources Management School NAS Memphis (96) Millington, Tennessee 38054	1