

CREW COORDINATION CONCEPTS FOR MAINTENANCE TEAMS

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1.0 INTRODUCTION

Several months ago while conducting a workshop in Los Angeles, a facilitator was approached by a woman who was about to attend the class. She stated she couldn't wait to attend the workshop and had been looking forward to it for weeks! It seems her supervisor had attended Crew Coordination Concepts (CCC) a month earlier and it had made a profound change in his attitude and in their department; so much so, she had changed her plans to resign from the company and was now looking forward to continuing her career at Continental!

Experiences such as these illustrate the significant impact Crew Coordination Concepts has had on individuals at Continental. Today, I would like to present an overview of the course as it is currently conducted. Secondly, Dr. James Taylor, Ph.D. will discuss results of his research. And finally, I will conclude with some feedback we have received and comments on future plans.

A recent survey conducted at Continental found that 70% of a maintenance managers time is spent interacting with **people**, not using technology. This is generally spent in crew meetings, assigning tasks, answering questions and interacting with other departments.

We have recognized that Maintenance has as much responsibility for safety as cockpit crews - this is a **safety** program. As we have seen, most human factors efforts have been in other areas e.g., environment, publications, etc. This program focuses specifically on **human behaviors, relationships** and **interpersonal skills**.

NASA research in 1979 identified management of resources as a critical area. This has formed the basis for CRM or CCC at Continental. We believe Maintenance has the same problems in human behavior, listening, and speaking.

This program was initiated at Continental Airlines by Ray Valeika, Senior Vice President, Technical Operations. He had attended a Pilot's CRM workshop. He concluded the same issues are faced in Maintenance. We began CCC Workshops in June 1991. We have trained 1200 of 1800 management employees thus far.

2.0 KEY OBJECTIVES

The key objectives we discuss in the course are:

Assertive Behavior - This is often **confused with aggressive** behavior. This program, throughout Continental Airlines, is defining the word ASSERTIVE.

Leadership Style - We all are different and it's important to understand these differences in order to make the Technical Operations work "Teams" more effective.

Norms - "That's the way we do it here." **NORMS** are often a powerful influence, and often in conflict with safe operations. They exist in every organization!

Developing Interpersonal Skills - Listening, Supporting, Confronting and Feedback. **THESE SKILLS ARE NOT WELL DEVELOPED IN MOST INDIVIDUALS.** Elaborating on these skills can make supervisors and work teams more effective.

Problem Solving - How to use all available resources and recognize the possible weaknesses in our own skills in decision making.

Stress - Understanding it and then how to control it. Much is written on this subject but little is understood; the purpose is to build awareness and ways to manage our own stress.

3.0 SEMINAR STRUCTURE

The Seminar Structure is as follows:

- The program was originally designed for Supervisory Personnel (Assistant Supervisors, Supervisors, Managers etc.).
- It now includes all other management personnel and Inspectors.
- It is mandatory for all levels in the organization.
- We utilize two facilitators; one Human Factors facilitator to present concepts, one Continental Airlines Technical Operations facilitator to relate concepts to workplace.
- This is a full two-day workshop.
- We normally have 20-25 participants, mixed by Department and level within the organization.
- It constructed as a highly interactive Program. It is not a lecture. It relies on case studies, videos, table work, and individual/team exercises.

As stated earlier, the program is divided into two days. The concepts are presented in the following fashion.

4.0 DAY 1

Introduction - UA Portland Flight 173 Video. This is a classic industry accident which sets the tone for the workshop.

Perception vs Reality Case Study - CAL GUAM 043/046 This Maintenance case study helps participants relate course concepts to their own work place. It helps to make it real. This module consists of discovering how an individual may be focusing on the wrong problem. What assumptions do we make? The concept of testing assumptions is introduced.

Behavioral Styles - Introduction of the concept of three basic behavioral styles. This is not new technology, but most individuals are not aware of the impact of their own style.

Leadership Style (SDI) - This module aids an individual in ascertaining who they are. This is not an "in depth" instrument, but Continental Airlines history suggests that it provides insight.

Assertiveness - Now it's time to define this preferred Behavioral Style. This has tremendous impact because the groups develop the definition of the concept!

Stress - This is a very stressful occupation. The focus is on awareness and how to control stress.

5.0 DAY 2

SUB ARCTIC SURVIVAL - An exercise in decision making and team work. Most individuals assume they possess acceptable decision making skills. This module helps build awareness and possibly a better way to do it!

NORMS - EAL 855 Case Study leads to frank discussion about what goes on in the workplace. Effective/ineffective NORMS and what can we as Supervisors do. This module helps promote good listening, supporting, feedback skills, and also how to deal with conflict.

We close the day with activities addressing listening skills, supporting others, conflict and how to deal with it, and proper feedback.

It is important to understand in a little more detail the concepts we present in the workshop. Each one of these concepts form the "core" of our program.

6.0 PERCEPTION VS. REALITY

As discussed earlier, Perception vs. Reality is presented in the context of a case study. This case study is an event which occurred in Guam last year where two DC-10's were involved in a ground handling accident. This incident caused serious damage to both aircraft.

The issue is made that unless your perception of a situation is actually reality, you **are considering the wrong problem.**

As supervisors we "**Must test the assumption**". This is an important communication process relying on the freedom to speak-out.

7.0 TESTING ASSUMPTIONS

Major or minor incidents can not happen if your organization commits to assertive behavior. Methods of testing assumptions are:

- **Advocacy** - Speaking up. It is my responsibility to tell all involved what my plan is, and permission is given for all "Team" members to contribute.

- **Inquiry** - It is your responsibility to tell me what's wrong with the plan or what you don't understand about the plan.
- **Active Listening** - Nothing works unless we hear and understand it.

8.0 BEHAVIORAL STYLES

This module sometimes has the most impact on participants. We employ an instrument, referred to as the "SDI" (Strength Deployment Inventory) and several exercises. These combined provide insight to the individual as to his/her own behavioral style and how it relates to the concept of Assertiveness.

At this point the participants have completed the question and answer portion of the SDI.

- The group then puts their arrows on the chart during a break.
- We discuss arrow meaning, i.e.:
 - **Start of arrow** - OK Day
 - **Arrow Point** - Stressful day
 - **Length of arrow** - Degree of change in style
 - **Low Scores** - In a particular dimension, individual experiences great anxiety when required to move to another behavior.

Following the SDI we come back to this issue of assertiveness. It is a **learned skill** and must be practiced in order to be effective. It is a concept based on RIGHTS such as:

- The right to express feelings and ideas.
- The right to be listened to and taken seriously.
- The right to ask for what you want.
- The right to have one's own needs met.
- The right to be treated with respect.
- The right to say "NO".
- The right to ask for information.
- The right to make mistakes.
- The right to be assertive.

With constructive intent it is important to use the appropriate behavior at the appropriate time.

After discussing assertiveness, we return to stress. Stress is the element which helped us define a "Bad day" in the SDI administration. Now we try to deal with stress and offer some insight into its effects. We also acknowledge this is a complicated subject and we only scratch the surface. The objectives we attempt to accomplish are: recognize stress, the dynamics of stress, effects on health and performance, and intervention points (or what can we do about it).

At the beginning of Day 2, we start with a fun exercise. This is similar to others you may be familiar with such as "Lost on the Moon". This one however, has its roots in aviation since it deals with an aircraft crash.

- Sub Arctic Survival Situation involving an aircraft crash into a lake in northern Canada in October

- **Exercise will show a group will do better than an individual** in decision making 96% of the time.
- Facilitators will comment on how groups arrived at decisions and the positive/negatives of interpersonal skills.
- The discussion will center around the question: "Would being more assertive by all group members have changed the outcome of your decisions?".

9.0 NORMS

Norms are discussed in the context of a case study, EAL 855 - Miami, 1983.

- "Norms" are unwritten rules and behaviors which are reinforced by the group. "This is the way it's always done here!" "Everybody always does it this way."
- Groups are put to work identifying "Norms" which are evident in the case study.
- Groups identify NORMS which apply to our operation.

Examples of NORMS discussed are:

- Not using taxi checklist
- Working from memory
- No wing walkers
- No head-set communication
- "But will you take is anyway?"

Finally, we discuss as supervisors, how to change norms.

10.0 ACTIVE LISTENING

We relate this back to the Sub-Arctic Survival exercise, facilitators speak to how each group listened to one another. We use a sleep exercise ("**SELECTIVE HEARING**") to illustrate that we hear what we want to hear. A communication model is introduced. This model illustrates the inefficiency of communication. Listening barriers are discussed. These include rank, preoccupation, interrupting, and detouring. We consider eye contact, affirm and ask questions, and provide feedback as listening tips to improve skills!

11.0 SUPPORTING/CONFRONTING/FEEDBACK

Role plays are an important part of the module. They make it relevant and "Operationally Oriented". This is the implementation of **ASSERTIVENESS!!!**

This covers general course content as presently structured.

Since the beginning of this program we have collected survey data and operational performance data. Now Dr. Taylor will speak to the results of that study and analysis.

12.0 CCC EVALUATION

What I am presenting today is a sample of the survey and performance results from the ten months experience evaluating Continental Airline's "CCC" training in technical operations. This includes selected data from attitude questionnaires (4 types) and from performance measures (14 types).

This Results/Evaluation research involves cooperation among three institutions. A brief description of the division of labor in this evaluation task will put the research in context. The FAA Office of Aviation Medicine has funded the data analysis and will publish the conclusions. The other two institutions are involved as follows.

Continental Airline's (CAL) role:

- Conceived the data.
- Designed and developed the training.
- Chose the basic questionnaire.
- Administered the training and the questionnaires.
- Provided monthly performance measures.

Institute of Safety and Systems Management (USC) role:

- Helped CAL modify the selected questionnaire.
- Designed the analysis plan.
- Validated questionnaire and performance measures, and confirmed statistical methods.
- Acted as objective third party for receiving the questionnaire and analyzing the results.
- Processed raw data and performed statistical analyses.
- Prepared reports and draft conclusion to simulate discussion among the FAA, CAL and other industry representatives.

12.1 ATTITUDE QUESTIONNAIRES

The attitude questionnaires developed for this present study are drawn from earlier work by Bob Helmreich (the CRM Attitude Questionnaire), Bill Taggart (the Maintenance, Engineering & Logistics Description) and a Social Analysis Questionnaire by John Geirland. Some questions are multiple-choice, some "write-in;" some are measures of attitudes, some measure perceptions of behaviors, as well as demographic information).

The four versions of the questionnaire used to evaluation the CAL CCC program are as follows:

- a. "Baseline Questionnaire" (n=900 returned from 1800 sent May '91), mailed to all managers in technical operations before training announced.
- b. "Before" training questionnaire (n=600, through March '92), requested of all participants in the first minutes of the workshop.
- c. "After" training questionnaire (n=600, through March '92), requested of all participants at the workshop's conclusion.

d. "Follow-up" questionnaires, which are mailed out to all past participants two, six, and 12 months following their training. By July, 1992 the numbers of follow-up questionnaire which had been received and coded were: 2-months n=240, 60-months n=200, and 12-months n=75.

12.2 PERFORMANCE MEASURES

1. CAL Technical Operations has developed and applied over 100 measures of performance since 1988. Of these, 14 were selected as suitable and appropriate for evaluating the effectiveness of the CCC training in maintenance and inspection.
2. Three criteria for selecting these 14:
 - i. available separately by work unit (not merely by department or function),
 - ii. can be influenced by individual actions,
 - iii. no direct overlap with other measures in the set.
3. The 14 selected fell into three performance categories: Safety, dependability, efficiency.
4. All 14 performance measures were graded by the trainers for their sensitivity to the training.

Today's presentation will illustrate relationships between post-training (including 2,6, and 12 month follow-up) attitudes and behaviors with 4 of the 14 performance measures. I will also discuss participants' reported reactions to the training, including their open-ended response to write-in questions.

What has been accomplished during the first 10 months of the CCC training?

1. It has determined that the 30 item questionnaire could be summarized into four main attitude clusters, two behavioral issues, and several categories of write-in answers.
2. It was determined that the statistical properties of the questionnaires and its data are "good" and we have confidence in the evaluation reported here.
3. It was determined that the statistical properties of most of the performance data are also good -- and this improves when months are added together.

Results reported here today come from the following analyses:

Examination of answers to some questions about the training itself and compared them with other companies and occupational groups in the airline industry.

Comparison of participant post-training "intentions" to use the training, with their subsequent "reported use" of their learning.

Matching of pre-and post-training attitudes to explore the shifts toward "CCC" management beliefs.

Examination of the stability of those training-related shifts in attitudes over time (6-months after training).

Correlation of the post-training attitudes and behaviors with maintenance unit performance.

12.3 THE RESULTS

Figure 1: "Rating Behavioral Change." In completing the questionnaire immediately following training managers answered how much change in the company's way of doing things they would change. The left-hand bar for each category represents a typical pilots' group following CRM training (reported by Helmreich, 1989), and the right-hand bar is the CAL technical operations managers immediately following their CCC training. The graph show that pilots expected that slight-to-moderate change would result from their training. The technical operations managers report that they expected moderate-to-large change; quite an expectation for the managers -- they are saying that the training will really make a difference.

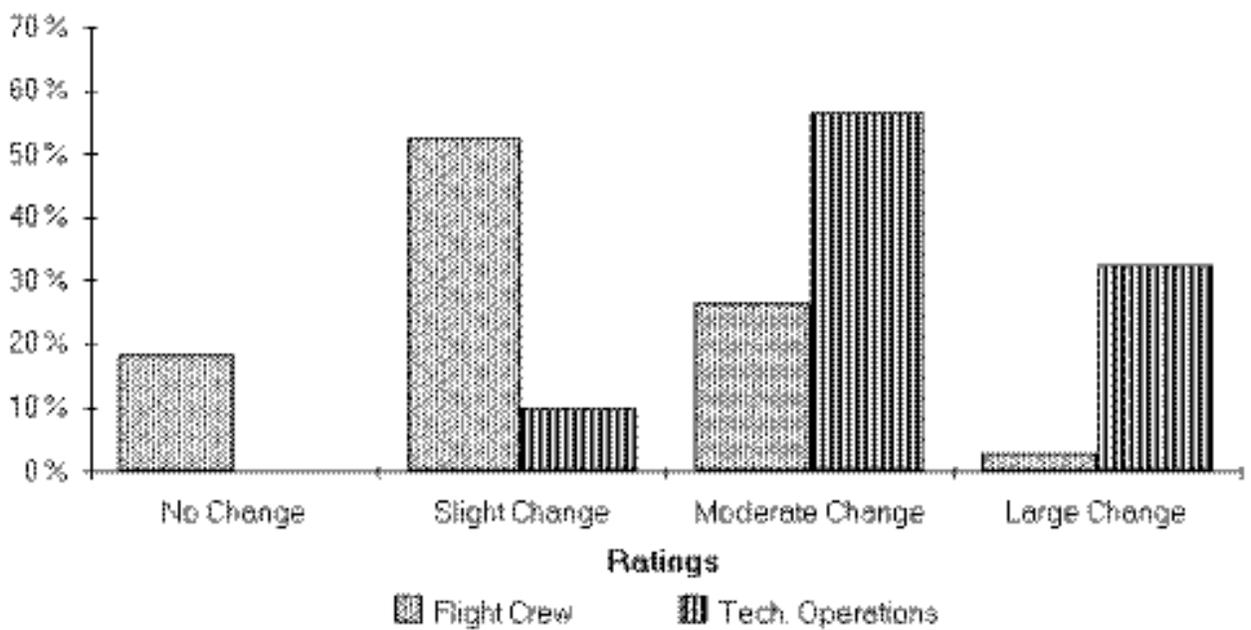


Figure 1 Percentage Reporting Behavior Change as a Result of CRM Training

Figure 2: "Actual Use of Training." This graph displays the answers to an open-ended question. The three bars for each category are (left to right) "better listening," being more aware of others" (both passive behaviors); and "dealing better with others" (and active behaviors requiring other to react in some way). It shows that two months after training the managers write in that they are using the more passive skills learned in their CCC course, but by 12 months after more of them say that they are actively dealing better with others. This is an exciting findings that are training is sticking with the managers.

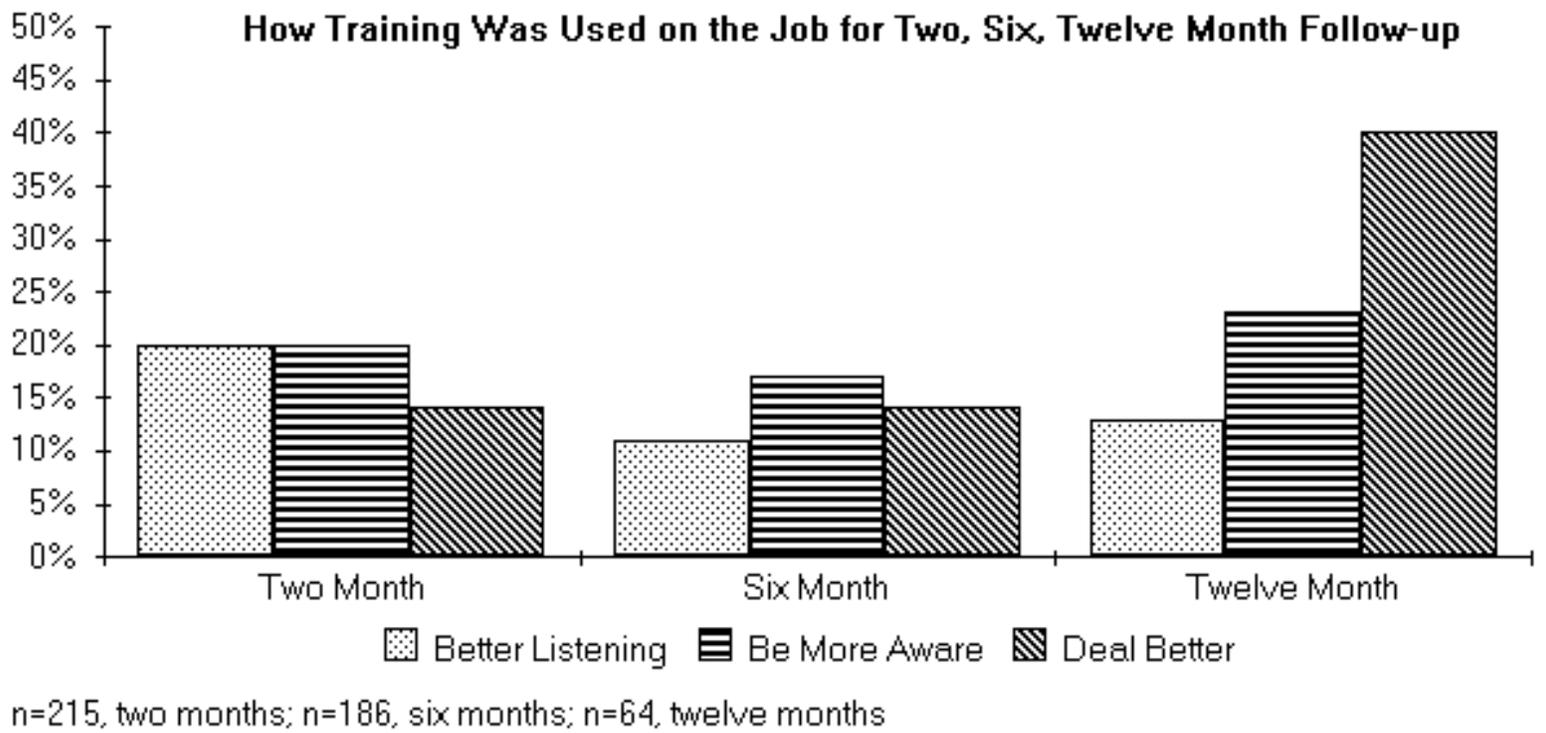


Figure 2 Reported Use of Training

Figure 3: "Pre-/post-training Attitude Changes." Here is the first graph showing the results using the four attitude scales derived from the questionnaire. All four of these attitude scales are expected to measure ideas and beliefs taught in the CCC training. From left to right the scales are "Sharing Command Responsibility," "Communication and Coordination are Useful," "Stress Affects the Quality of Decision," and "the Importance of Voicing Disagreement." The post-training attitudes shown in left-most three scaled are significantly higher than before training. The differences shown in the figure may look small but they are real (not likely to be random or chance occurrences) and they are in the direction expected. The right-most scale shows a nonsignificant (statistically it's probably not "real") shift in "willingness to voice disagreement" (our measure of assertiveness). Actually, with further investigation we found that there was a significant and positive change in the value of assertiveness among the maintenance supervisors in our sample, while assistant supervisors, managers and directors showed either no change or a non-significant negative shift.

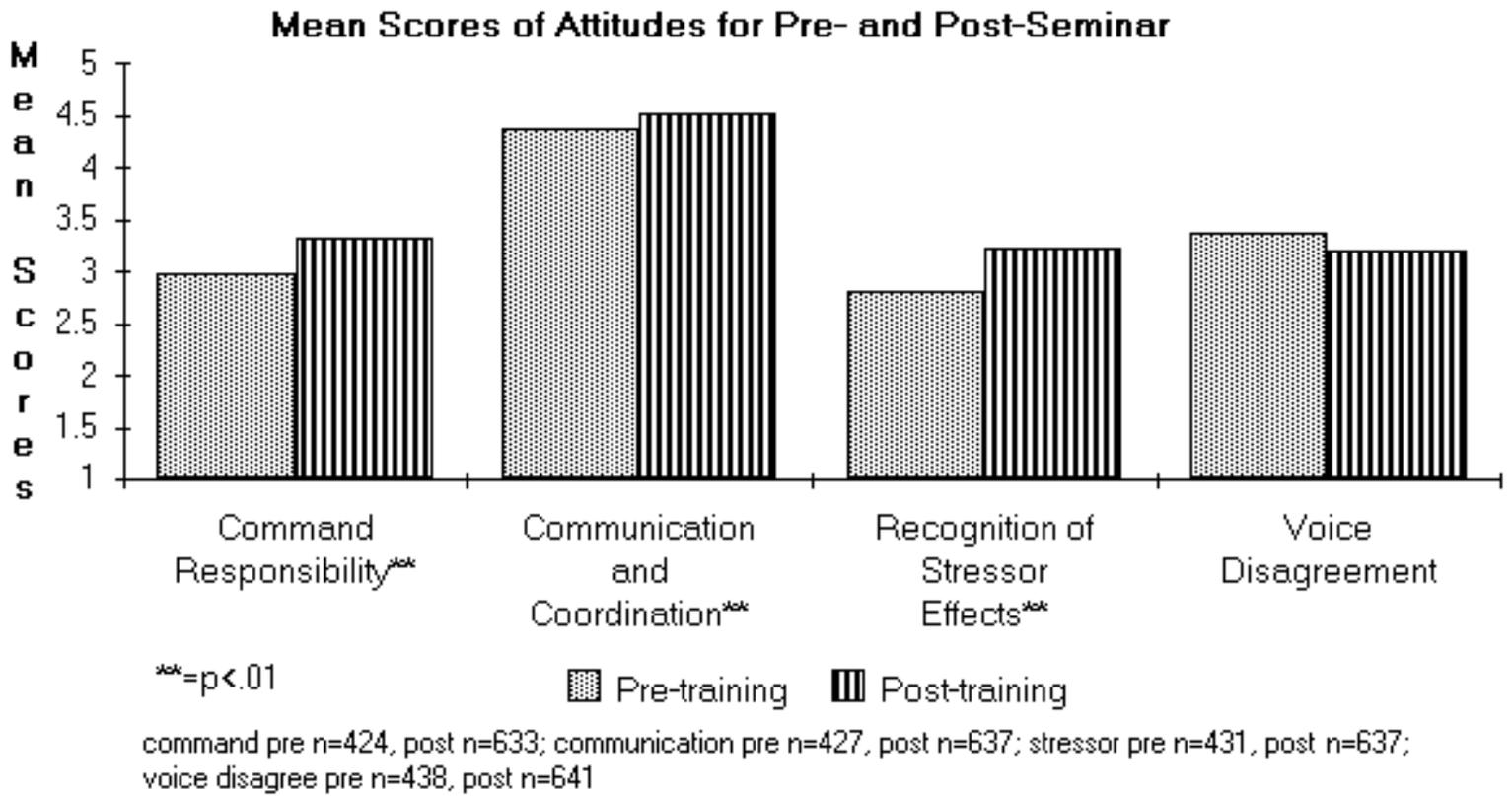


Figure 3 Comparisons: Pre- and Post-Training

There are two other scales from the questionnaire we are interested in that were mentioned above as perceptions of goal attainment behaviors in technical operations. These scales were not expected to change because of the training, but they were included in the questionnaire to help reveal team effects that may be independent of the training curriculum over time. The differences of the goal attainment scales, before and after the training, are not large.

Figure 4: This figure shows a test of the stability of the 4 attitude scales 6 months after the training. We can see that the measures are very stable -- the average scores don't change much at all. The goal attainment scales also shows stability of response six months after the training.

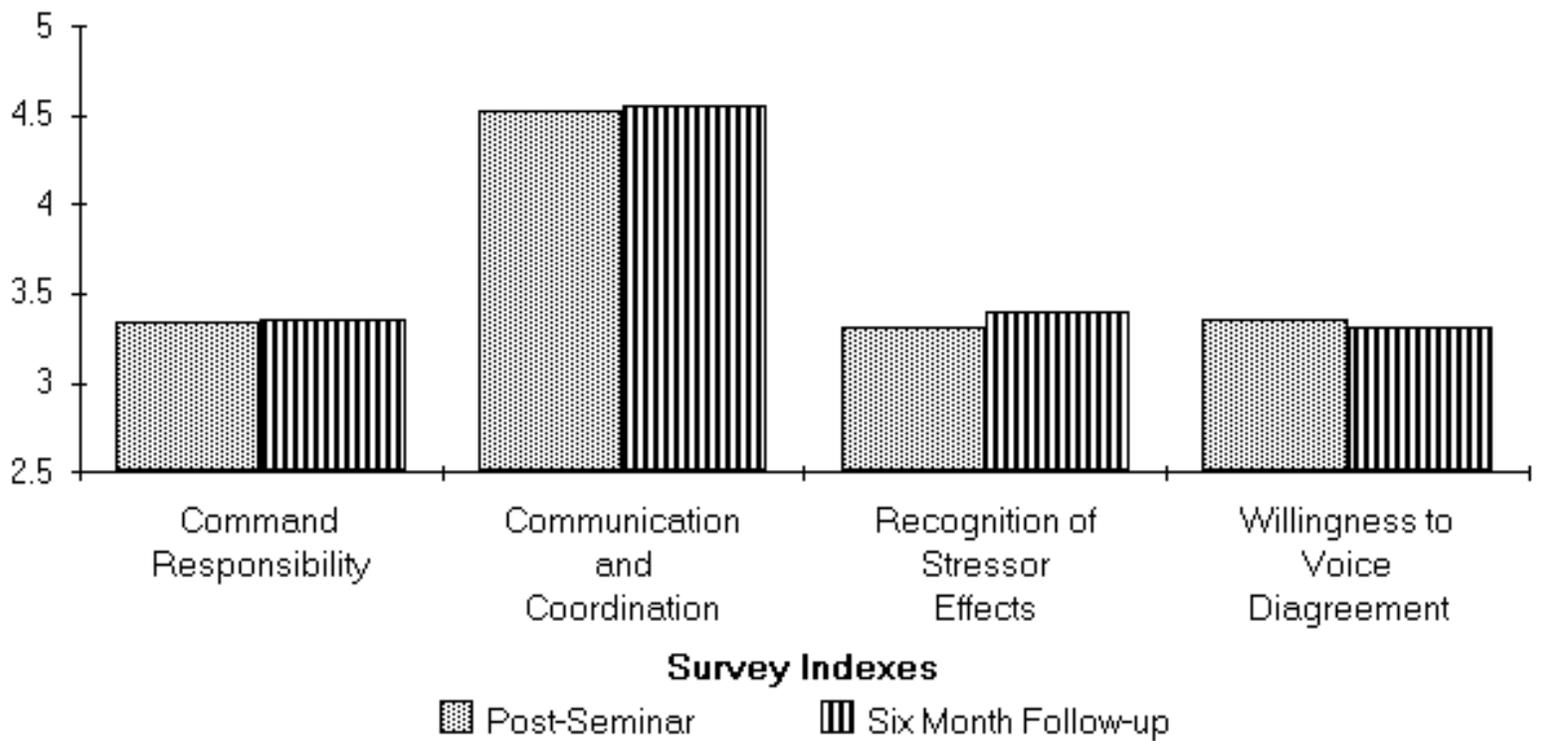


Figure 4 Mean Scores of Indexes for Post-Seminar and Six Month Follow-up for Technical Operations

Summary. What has been presented so far shows, for the first 600 managers, after attending the CCC course...

- They strongly believe that the CCC course is useful and practical.
- They practice more active lessons from the training as times goes by.
- They report changes immediately following the training in their attitudes about sharing command responsibility, the value of communication/coordination, the importance of stress in decision making, and willingness to be assertive.
- And they retain those new levels of attitudes in the months following training, and show stability in their views about goal attainment.

The final portion of this section on evaluating CCC training will now turn to several of the relationship between the questionnaire scales and four maintenance unit performance measures. Three of the measures we'll look at here were rated as sensitive to the training. Let's start with that less sensitive one, to explain the way the following tables are set up and to provide a contrast to the more interesting and consistent results in the final three tables.

Table 1: "Minimizing Use of Overtime." The left hand side of this table, the four attitude scales and the two goal-attainment scales form the six rows of the table. The four columns represent good performance in reducing overtime costs for four different time periods. August & September 1991 is the concurrent performance immediately following training. Oct/Nov represents two months after training. Dec/Jan is four months after training, and Feb/Mar is six months after.

Table 1 Questionnaire Scales Related to Overtime Performance

EFFICIENCY				
n=41	Post-Training Performance Aug/Sep	Post-Training Performance Oct/Nov	Post-Training Performance Dec/Jan	Post-Training Performance Feb/Mar
"Sharing Command Responsibility"	.20+	-.06	-.02	-.02
"Communication and Coordination"	-.11	.00	.18++	-.12
"Recognition of Stressor Effects"	.04	.22+	.00	-.28*
"Willingness to Voice Disagreement"	.04	.00	.19*	-.05
"Goal Attainment with Own Group"	.04	-.09	.14	.05
"Goal Attainment with Other Groups"	-.02	-.19+	.10	-.16++
*p<.05, +p<.10, ++p<.15				

The cell entries are correlation coefficients or statistics showing the degree of relationship between the 6 scales and the overtime measures at four different times. The data that go into the calculations of this statistic are work group averages, so the number can never exceed the total number of groups reporting that performance. Even a large company like CAL only has 60 work units that report overtime used. This table shows that 41 of those were included in this analysis. The missing ones were dropped for a variety of reasons, but mostly because all the managers haven't been through CCC yet.

The trainers expect (other things being equal) that the attitudes will be related positively to performance -- that is that the higher the post training attitudes, the better the performance; and the lower the attitudes, the poorer the post training attitudes.

Theoretically correlations can be either positive or negative and they can be small or large. I've circled the biggest correlations in red (bold). All the others can be ignored as representing no relationship at all -- just random variation. A negative relationship, by the way, is one in which work groups with more positive post training attitudes or behaviors have poorer performance than those units in which the managers report less positive attitudes.

Let's look at the table. Not only is the pattern of larger relationships in the table not uniform, there are several negative relationship as well as some positive ones. This is clearly a situation that the sponsors and trainers of a program like CCC wouldn't want if they expected the training to affect reductions in overtime all by itself. **Remember**, this measure of efficiency in labor costs was rated by the trainers not to be as greatly influenced by the CCC training as other performance measures -- so this is just an example of what everything would be like if we weren't showing training effect. Incidentally the numbers of "large" correlations (7) in this table is the maximum number this size or smaller that we would expect to find by chance (30%).

The final three tables to be presented here show performance measures that the trainers expected to be related to the training.

Table 2: "Reducing Aircraft Ground Damage." This table shows one of the two safety-related performance items in our presentation today. Once again the four attitude scales and the two goal-attainment scales form the six rows of the table. The four columns represent good performance in reducing ground damage for four different time periods. August & September 1991 is the concurrent performance immediately following training. Oct/Nov represents two months after. Dec/Jan is four months after training, and Feb/Mar is six months after. The largest correlations are in bold.

Table 2 Questionnaire Scales Related to Maintenance Aircraft Ground Damage

SAFETY				
n=22	Post-Training Performance Aug/Sep	Post-Training Performance Oct/Nov	Post-Training Performance Dec/Jan	Post-Training Performance Feb/Mar
"Sharing Command Responsibility"	.06	-.311	.17	.26++
"Communication and Coordination"	.05	.00	-.04	.00
"Recognition of Stressor Effects"	-.08	.00	.28+	.05
"Willingness to Voice Disagreement"	.43*	.27++	.24++	.69*
"Goal Attainment with Own Group"	.13	.40*	.30+	.06
"Goal Attainment with Other Groups"	.36*	.13	.26++	.08
*p<.05, +p<.10, ++p<.15				

There is only one negative relationship in the table and it is statistically the likely product of random variation (1=4%). The largest relationships on the table are between positive attitudes for assertiveness ("willing to voice disagreement") and positive ground damage performance for all four time periods. The average attitude about being assertive (for example, to intervene when aircraft may be damaged) is different in different work groups with this more positive attitude. Their ground-damage performance is better as well. There are several large positive relationships between this safety performance indicator and the goal attainment scales.

Table 3: "Reducing Occupational Injury" is another safety-related performance indicator. This table has the same six rows as the previous one, but in this table the four columns contains good performance in reducing work-related injuries for the four time periods (concurrent, 2 mo, 4 mo, 6 mo). Here the major relationships show a pattern that the two goal attainment scales account for most of the difference. In work units where management believes that team goals are shared within their team and between teams occupational injury rates are consistently lower than the other work units in all time periods. Other relationships in the table don't show much uniformity of pattern.

Table 3 Questionnaire Scales Related to Occupational Injury

SAFETY				
n=41	Post-Training Performance Aug/Sep	Post-Training Performance Oct/Nov	Post-Training Performance Dec/Jan	Post-Training Performance Feb/Mar
"Sharing Command Responsibility"	.19++	-.11	.15	.05
"Communication and Coordination"	.17++	.09	-.06	.09
"Recognition of Stressor Effects"	.04	-.06	-.17++	.07
"Willingness to Voice Disagreement"	-.04	.20++	-.09	.10
"Goal Attainment with Own Group"	.31*	.31*	.22+	.29*
"Goal Attainment with Other Groups"	.19++	.27*	.17++	.45*
*p<.05, +p<.10, ++p<.15				

Table 4: "Aircraft Departures Within 5 Minutes of Schedule." This dependability measure involves only the line maintenance stations, so the number of data points in the analysis is less than the last table (26 <41). Here the pattern of large relationships is between sharing command responsibility and on-time performance. There is no surprise here for anyone who's followed a maintenance foreman or manager at a large line station during its busiest hours -- they've got to relinquish moment-to-moment decisions or they will slow things down. These relationships for all four time periods mean that there are differences in management attitudes toward sharing their power and the lower they are the slower they are -- **and** remember, as we saw from the table reporting ground-damage performance, people may have to be willing to speak-up as needed to assure high levels of safety.

Table 4 Questionnaire Scales Related to Departures Within Five Minutes

DEPENDABILITY				
n=26	Post-Training Performance Aug/Sep	Post-Training Performance Oct/Nov	Post-Training Performance Dec/Jan	Post-Training Performance Feb/Mar
"Sharing Command Responsibility"	.24++	.39*	.34*	.24++
"Communication and Coordination"	.19	-.13	.19	.29+
"Recognition of Stressor Effects"	.18	.22++	.29+	.37*
"Willingness to Voice Disagreement"	.18	.15	.15	.24+
"Goal Attainment with Own Group"	.12	.07	.40*	.50*
"Goal Attainment with Other Groups"	.08	.03	.14	.36*
*p<.05, +p<.10, ++p<.15				

Also notice here that recognizing the adverse consequences of stress is also related to on-time performance. Recall that line stations (anyone in the industry would agree) are where some of the highest levels of work-related stress are endured.

Finally, by six months after training all six scales are shown to be positively related to dependable performance. This may reflect that by March a large proportion of line station management had gone through the training. Those stations with strong manager support for the CCC program are thus encouraging one another to practice the CCC message.

Conclusion. We can -- with confidence and enthusiasm -- report that these (still incomplete) results are beyond expectations -- the training really seems to be making a difference in participant response to it, in changes in attitudes, and performance as well.

13.0 REACTIONS

This workshop has been met with almost universal acceptance. The interesting point is to discover how these concepts have been implemented in the daily operation.

For example, last year we discovered that at least for some supervisors at a heavy maintenance base, ETR'S (Estimated Time of Release) for aircraft were no longer stressful. After investigating, we found the director of the base had changed the way ETR'S were established by involving his managers and supervisors in the process. This change coincided with his attendance in a workshop several months prior.

Feedback demonstrates how these concepts are applied. Quotes such as:

"Requested crew input before job start up" and "Listen more, dictate less, always be aware of safety" appear on follow-up surveys as ways of implementing the skills presented.

I recently discovered this response on a survey that I thought was extremely powerful: "Be more assertive in areas of concern where I used to say 'the boss knows best'. Frostie died because he thought his boss knew best." We feel it is significant that participants are still referring to the concepts two, six, and twelve months after the workshop. What is the bottom line?

During the 12 months the program has been in place, trends have indicated:

- The cost of repair due to maintenance caused ground damage is down 68%.
- The number of maintenance caused ground damage incidents are down 34%.
- Occupational Injury hours paid are down 27%.
- Occupational Injury Medical paid is down 12%.

14.0 FUTURE PLANS

- We will conduct year over year analysis of operational statistics to further define impact.
- We will conduct individual station studies to determine why it works well at some stations and not so well at others.
- We are developing a new program for hourly/non-management to begin in January 1993.
- We are developing a supervisory follow-up course to begin also in January 1993.

15.0 CONCLUSIONS

- The program is sound.
- We have demonstrated it saves money/increases safety.
- It is a mature program being widely accepted.

We are convinced this program works and there is very little investment. We are happy to have the opportunity to share this information with other operators and organizations. To borrow a phrase from a well known commercial "Some ideas are just too good not to share".