

University of Richmond UR Scholarship Repository

Master's Theses

Student Research

5-1986

Effectiveness of computer-based, modified computer-based and workshop training in the learning/application of leadership skills

Karen E. Chappell

Follow this and additional works at: http://scholarship.richmond.edu/masters-theses

Recommended Citation

Chappell, Karen E., "Effectiveness of computer-based, modified computer-based and workshop training in the learning/application of leadership skills" (1986). *Master's Theses.* Paper 502.

This Thesis is brought to you for free and open access by the Student Research at UR Scholarship Repository. It has been accepted for inclusion in Master's Theses by an authorized administrator of UR Scholarship Repository. For more information, please contact scholarshiprepository@richmond.edu.

Chair and Advisor

Members

Dr. Joanne C. Preston Associate Professor of Psychology

Dr. Kenneth A. Blick Professor of Psychology

Dr. L. James Tromater Professor of Psychology

Approved:

Joanne C. Preston (Joanne C. Preston, Ph.D.)

hih

(Kenneth A. Blick, Ph.D.)

Durg

(L. James Tromater, Ph.D.)

EFFECTIVENESS OF COMPUTER-BASED, MODIFIED COMPUTER-BASED AND WORKSHOP TRAINING IN THE LEARNING/APPLICATION

OF LEADERSHIP SKILLS

by

KAREN E. CHAPPELL

B.S., Virginia Commonwealth University, 1969

A Thesis

Submitted to the Graduate Faculty

of the University of Richmond

in Candidacy

for the Degree of

MASTER OF ARTS

in

Psychology

May 1986

LIBRARY UNIVERSITY OF RICHMOND VIRGINIA 23173

Richmond, Virginia

LIBRARY UNIVERSITY OF RICHMOND VIRGINIA

Abstract

This study examined the effectiveness of training methods in effective leadership principles. Forty-two male and female Introductory Psychology students were randomly assigned to one of three conditions: computer-based training (CBT), computer-based training with videotaped vignettes (CBTV), or group-based workshop training with videotaped vignettes (GBW). Training effectiveness was assessed on two dependent variables, pretest/posttest scores in conceptual knowledge and pretest/posttest scores in applied knowledge. Only partial support was found for the hypothesis that there would be significant differences in mean pretest and mean posttest scores on both conceptual and applied knowledge as a result of training method. Method of training was not found to significantly affect these mean scores on either dependent variable. However, training in general was found to significantly increase mean scores for both conceptual knowledge and applied knowledge of effective leadership principles.

3

Effectiveness of Computer-based, Modified Computer-based, and Workshop Training in the Learning/Application of Leadership Skills According to Warren (1979), the purpose of training is to bring about a behavior change. Systematic efforts to train workers for skilled employment actually began in medieval times with apprentices serving with master Tickner (1966) pointed out that with the advent of the Industrial craftsmen. Revolution, this training method proved ineffective in meeting the technological needs of industry. Mass production and interchangeable parts necessitated the founding of professional training schools to provide adequate technical training. Industrial needs during World War II led to the present status of training. During this time, training within industry was needed to handle the influx of unskilled workers who were recruited to support the war effort. Once the war ended, industry was faced with immense training and retraining needs in the technical arena. According to Eurich and Boyer (1985), training experienced another growth spurt in the 1950's when corporations began adding training and education in interpersonal skills for management development.

Initially, technical training was provided on the job on a one-to-one basis. In order to keep pace with the changing needs of a technologically advanced society, Tickner (1966) reported that technical training began to be offered to larger groups of potential workers in a classroom setting. The basic methodology at this time was structured lecture coupled with instructor demonstration and trainee practice.

Ofiesh (1965) reported that the next step in technical training was programmed instruction. This self-paced approach has been used successfully to implement training in a wide range of technical areas. Glasgow and

Simkins (1981) examined the effectiveness of a self-paced approach aimed at developing a combination of technical and interpersonal skills. These authors found that there was no significant difference between the factual or applied knowledge of groups receiving training in performance appraisal techniques via a self-paced method, a self-paced method with a 1/2 day group-based exercise, and a lecture method implemented by subject-matter experts. However, the self-paced group completed training in less time.

Workshops have not been reported to have been used to provide technical training. Warren (1979) stated that the effectiveness of using this method to bring about changes in motor skills is no greater than the results achieved using a lecture method with a written test.

Computer-based training (CBT) has offered a technical training option since the late 1950's. Mallory (1981) reported that Ford Motor Company found that a computer-based technical training program, complete with a graphic CRT display, produced significant differences in the pretest/posttest scores indicating a major overall improvement in technical knowledge. Furthermore, this program eliminated the individual significant differences found in the scores on the pretest measure indicating that, regardless of background, CBT brings all trainees to the same level of accomplishment. This study did not, however, examine the effectiveness of traditional instructor-led training in the same technical area. Meyer (1984) found that interactive computer-based training was beneficial when used in technical training programs where training would otherwise require expensive equipment and/or involve danger to the trainee.

Research has also been carried out examining the effectiveness of CBT in programs aimed at developing a combination of technical and interpersonal skills. Davis and Mount (1984) examined the effectiveness of performance appraisal training in industry. Using a computer-based group (CBT) and a computer-based approach combined with a behavioral modeling workshop group (CBTW), these authors demonstrated that there was no significant difference between the groups in either conceptual or applied knowledge. This study did not, however, compare training results obtained using CBT with the results obtained using a traditional interpersonal skills training method, such as a workshop. Smith (1984) compared CBT with videodiscs used in conjuntion with guest speakers and modeling with conventional group-based training to teach state employees effective applicant screening procedures to be used in disbursing federal funds. Findings from this study indicated that computerbased trainees exhibited a higher pass rate on a written examination of the material covered; however, this study did not examine application of knowledge.

Interpersonal skills training began in industry in the 1950's; and, as reported by Crabb, Moracco and Bender (1983), these skills are too important to be used only in counseling. An increased emphasis on training in this area has led to use of a variety of training methods. Neider (1981) surveyed members of the American Society for Training and Development and found that these training professionals rated programmed instruction as the least effective method for the acquisition of interpersonal skills. Higgins, Moracco and Danford (1981) demonstrated that a group approach, which focuses on behavioral

change, yielded better ratings on empathic responding than the traditional lecture method. Crabb et al. (1983) found that human relations skills could be effectively developed and maintained in lay helpers by implementing microcomputer training supplemented by videotapes which provided modeling and the opportunity for practice. This study was not, however, comparative in nature. Fowler (1983) used computer-assisted instruction as a supplement to an introductory management science course in an effort to improve problem solving abilities. While no significant differences were found between the mean exam scores of the computer-assisted group and the traditional lecture group, results showed that students in the computer-assisted group did develop more positive attitudes toward quantitative methods.

There are numerous benefits of computer-based training which would intensify in significance if CBT can be shown to be an effective training modality for the development of interpersonal skills. Main (1984) and Schwade (1984) pointed out that computer-based training can reduce training costs because such training can be delivered at terminals located at remote company sites. This training approach eliminates the large capital outlays for travel costs involved in traditional training programs as well as offering the potential to improve employee morale by limiting the need to travel. These authors further stated that CBT could represent a cost-effective approach where large numbers of employees are involved. This method provides increased control over when an employee is away from the job to receive training; and, in addition, can offer a solution to the current training dilemma of shrinking training budgets and increasing training/retraining needs.

7

Computer-based training has been shown to reduce training time for technical training programs. Meyer (1984) reported that AT&T Information Systems currently used CBT to teach installation and maintenance skills. This program can be completed in 3-4 days, compared to the 7 days previously required using a traditional approach. J. C. Penney estimated that its computer-based inventory control training has cut training time in half. In addition, Smith (1984) found that computer-based trainees completed their technical/ interpersonal training 25% faster than group-based trainees.

Schwade (1984) noted that computer-based training also provides greater control over the quality of instruction and over the use of training time. With CBT, a company's training expertise does not vanish if the trainer leaves the company. Furthermore, training delivered via CBT was found to be consistent for all sessions for all trainees. This modality can also be used to meet a wide range of training needs through packaged software or through companywritten programs and updates.

Mallory (1981) and Phillips (1983) reported that computer-based training, like programmed learning, maximized educational success by providing each trainee with instruction that begins at his/her appropriate level and then proceeds at the appropriate pace. These authors found that CBT programs can reduce the weariness often felt by trainees in traditional programs where concepts are repeatedly rehearsed. Computer-based training was found to eliminate the reductions of trainee practice time often found with the lecture method (where sessions tend to digress into discussions of the trainer's personal experiences) as well as preventing scheduled practice from becoming instructor-led demonstrations. In addition, Mallory (1981) stated that computer-based training eliminates group peer pressure that slow learners often feel in traditional training situations. Mahoney and Lyday (1984) stated that interactive courseware provides the trainee with the opportunity to internalize the important understandings of the skills being presented through "hands on" experience where immediate feedback is provided.

Fowler (1983) found that computer-assisted instruction increased student expectations of using their newly acquired problem solving skills in other courses as well as improving students' confidence in their ability to apply these quantitative methods to business problems. Davis and Mount (1984), however, suggested that CBT alone may not be adequate for improving performance appraisal communication skills. A survey of employee satisfaction with his/ her respective appraisal discussions and with the performance appraisal system in general revealed that the computer-based with workshop group produced significantly higher employee satisfaction ratings.

Kearsley and Hillelsohn (1984) conducted a cross-corporation survey assessing the current status of computer-based training. Results revealed that 42% of the respondents were currently using computers as part of regular training in management/supervision skills, basic selling skills, and/or technical skills. Interactive video was either used or planned for use in 49% of the respondents' training programs. In addition, survey results showed that an average of 32% of these respondents' employees were currently participating in computer-based training.

Most of the existing research has examined the effectiveness of training methods for use in technical training and has shown that both programmed instruction and computer-based training are effective methods for developing

conceptual and applied knowledge. In the interpersonal skills area, programmed instruction has not proven effective. The existing research indicates that computer-based and modified computer-based training can be effective in developing interpersonal skills. However, the studies which have examined training results using computer-based training in this area have not compared the three methods most often used today, i.e. computer-based training, modified computer-based training, and traditional workshop training. Furthermore, there is no existing research which examines all three methods and their training effectiveness in both conceptual and applied knowledge of interpersonal skills.

Interpersonal skills encompass a wide array of specific content areas, making it necessary for this study to limit its focus to one specific interpersonal skill. Neider (1981) found that training professionals consider leadership skills as the most important training area. Therefore, this study compared the effectiveness of computer-based, modified computerbased, and traditional workshop training methods in the learning and application of leadership skills. The research hypothesis was that there would be significant differences in the mean pretest scores and the mean posttest scores on both conceptual knowledge and the application of this knowledge to leadership situations as a result of the training method used.

Method

Subjects

The subjects were 14 male and 28 female Psychology 101 students from the University of Richmond. These subjects volunteered to participate in this research as part of the requirements for Introductory Psychology.

Procedure

Each subject signed an informed consent form in accordance with the guidelines of the American Psychological Association and the Institutional Review Board for the Protection of Human Subjects at the University of Richmond.

Each subject completed a pretest measure consisting of Hersey and Blanchard's Leadership Effectiveness and Adaptability Description (LEAD) to measure conceptual knowledge (see Appendix A for complete proof) and one situational discussion question to measure applied knowledge (see Appendix B for complete proof). The pretest measure was administered en masse with the initial understanding that the test was being used to determine subject selection for the actual training. This procedure prevented the subjects from identifying potential posttest information during the actual training and confounding the results.

The situational exercises were scored on the assessment center dimensions of delegation, management control, influencing, and sensitivity (see Appendix C for complete proof). Scoring options ranged from 1 to 5 on behaviorally anchored rating scales developed for each dimension. These exercises were scored by a pair of unbiased raters who had been trained in standard assessment center rating procedures. These raters individually scored each exercise on the separate dimensions and then through consensus determined an overall score for each situational discussion question.

Each subject was then randomly assigned to one of three groups, with 14 subjects in each group. Group 1 (CBT) received 2 hours of computerbased training in effective leadership. Group 2 (CBTV) received 1 1/2 hours

of computer-based training in effective leadership and 1/2 hour of videotaped vignettes for complementary training. Group 3 (GBW) received 2 hours of group-based training complete with videotaped vignettes in effective leadership.

Computer-based training consisted of Thoughtware, Inc.'s software package, including workbook exercises, for "Leading Effectively". This training was implemented using IBM microcomputers with 128K memory capacities and color graphics monitros. The videotaped vignettes used were also provided by Thoughtware, Inc. and were designed to supplement the materials used for both the computer-based and the group-based training. The groupbased workshop was implemented using training materials provided by Thoughtware, Inc. These materials were designed to match the concepts and applications presented in the microcomputer software program.

Upon completion of each training module, each subject completed the posttest measure consisting of the LEAD and a second situational discussion question (see Appendix D for complete proof). These situational exercises were scored according to the same procedure used with the pretest exercises.

Each subject also completed a questionnaire to be used in evaluating his/her perceptions of the effectiveness of the training material, the scope of the training in general, and the effectiveness of the particular training method used (see Appendix E for complete proof). A Likert scale, with 1 being the highest possible rating and 5 being the lowest, was used for scoring each question. In addition, each subject was debriefed.

> LIBRARY UNIVERSITY OF RICHMOND VIRGINIA 23173

Results

A 2 x 3 repeated on 1 multivariate analysis of variance was performed on the two dependent variables of mean scores in conceptual knowledge and mean scores in applied knowledge of effective leadership principles. The betweensubjects independent factor was method of training represented by group (1 through 3) and the between-conditions factor was training with conceptual knowledge and applied knowledge as the two levels.

 ${
m SPSS}_{\rm X}$ MANOVA was used to analyze the dependent variables. Total N=42 was reduced to 39 with the deletion of the most statistically severe outlier in each cell. Results of evaluation of assumptions of normality, homogeneity of variance, homogeneity of regression, homoscedasticity, and multicollinearity and singularity were satisfactory after the deletion of outliers. The means and standard deviations are presented in Table 1.

Insert Table 1 about here

Using Wilk's criterion, this analysis revealed that the mean pretest/ posttest scores in conceptual and applied knowledge combined were not significantly affected by the interaction of group and training, <u>F</u> (4,70) = 1.17, p>.05, or significantly affected by the main effect of training method (groups 1 through 3), <u>F</u> (4,70) = 1.11, p>.05. Training itself was found to significantly increase the combined dependent variable mean pretest/ posttest scores, <u>F</u> (2,35) = 8.11, p<.05. The mean posttest scores for both conceptual and applied knowledge were significantly higher than the mean pretest scores for these two dependent variables.

Examination of the univariate effects on the two dependent variables revealed that training itself significantly increased mean scores in both conceptual knowledge, \underline{F} (1,36) = 5.13, p<.05, and applied knowledge, \underline{F} (1,36) = 6.32, p<.05. The results of the multivariate and univariate analyses are presented in Table 2.

Insert Table 2 about here

None of the three training methods, represented by group (1 through 3), significantly affected mean scores in either conceptual knowledge or applied knowledge of effective leadership principles. Therefore, the research hypothesis was rejected. Training time, regardless of the method used, was found to significantly increase mean scores in both conceptual and applied knowledge.

Univariate analyses of variance were performed on the dependent variables of the mean responses to specific questions on the evaluation of training questionnaire. The independent variable across all of these analyses was training method (group 1 through 3).

SPSS_x ONEWAY was used for these analyses. Results of evaluation of assumptions of normality and homogeneity of variance revealed slight skewness in the responses of Group 1 to Questions 3b and 3e, the responses of Group 2 to Questions 2c and 3c, and the responses of Group 3 to Question 2d. While analysis of variance is a robust test, this skewness should be taken into consideration when interpreting the questionnaire results presented in Table 3.

Insert Table 3 about here

Among the three training method groups, there were no significant differences found in mean responses concerning the scope of the training in general, the effectiveness of the training materials, the effectiveness of the respective training methods, the effectiveness of providing conceptual or applied knowledge, or the desire to participate in the respective training methods in the future. These non-significant differences among the training method groups indicate that each method was viewed effective from all training aspects.

Discussion

Overall, the results of this study indicate that training in effective leadership principles, regardless of modality, can improve levels of conceptual knowledge and the ability to apply these principles to leadership situations. Students subjected to equal training periods had higher mean scores on posttest measures than they did on pretest measures of both conceptual and applied knowledge of leadership principles.

Organizations currently spend large amounts of time and capital providing interpersonal skills and management development training programs for their employees, and it is encouraging to find that training, regardless of method, does significantly increase mean scores on both levels of knowledge involved in leadership training. This study was conducted using college students who possessed intellectual ability but no work experience. Actual employees would enter such training with work experience, and its subsequent impact

15

on ability should enhance training results and demonstrate that capital outlays for organizational training are worthwhile.

While the research hypothesis had to be rejected based on the results of this study, the findings imply that organizations should be free to choose a training modality based on cost-effectiveness considerations without having to sacrifice training results. The results of this study indicate that computer-based training can produce training results that are comparable to those achieved using traditional methods. Therefore, there may be times in organizations when CBT would represent a more viable choice of training modality.

Prior research (e.g. Main, 1984; Meyer, 1984; Schwade, 1985; and Smith, 1984) has shown that CBT decreases training time and training costs, especially when large numbers of employees require training or when the organization already has the hardware needed to implement computer-based training. This training modality may also prove to be the most appropriate choice when standardization of training content and quality, organizational control over training expertise, and ability to update training materials with minimal effort are primary concerns (e.g. Schwade, 1984). In addition, previous research (Mahoney & Lyday, 1984; Mallory, 1981; Phillips, 1983; and Schwade, 1984) has indicated that CBT can eliminate some of the traditional training concerns involved with trainee motivation and with training slow learners.

However, one of the subjects in this study was dyslexic and, consequently, had problems reading the material presented on the computer monitor. Several studies (DesLauriers, Hohn and Clarke, 1980; Hohn, Lauriers and Deaton, 1977; and Miller, 1979) suggested that the effectiveness of a self-paced study

approach, such as computer-based training, may be impacted by learner variables. High need for achievement, internal locus of control, and high autonomy can significantly improve the results achieved with a self-paced method. Schwade (1984), on the other hand, reported that interactive courseware used with computer-based training is designed so that the trainee must demonstrate mastery of a given topic before advancing to more difficult material and stated that such a feature is of optimal benefit to low achievers who have not previously mastered good study skills. Learner variables and learning disabilities were not controlled for in this particular study. It is possible that the subjects who volunteered to participate in this study did not represent the normal population on levels of autonomy, need for achievement, or locus of control. Grade-point average of the subjects was not considered in subject selection, and this could also have influenced the results of the study. In addition, the male/female composition of the subject pool was not balanced, and it could be that there were sex differences that were not controlled for.

This study did not examine the contributions of social interaction, informal learning, or opportunity for team building which are factors that are present only in traditional workshop training. It could be that these and other variables might play significant roles in the effectiveness of training methods for particular subject matter areas and/or in a true organizational training situation.

The overall non-significant differences in responses to the evaluation of training questionnaire further supports the finding that training in

leadership principles can be effectively implemented regardless of training modality. All participants appeared to be satisfied with the training in general and with their respective training modality. All participants reported confidence in their grasp of leadership concepts and in their ability to apply these concepts. In addition, all participants reported that they would not mind participating in their particular type of training on a fairly frequent basis. This finding should enable companies to place an even greater emphasis on cost factors and other training design considerations, as it would seem that employees would respond positively to training regardless of which method of delivery the organization chooses.

There were several limitations to this study that need to be addressed in future research. First, this study only examined effectiveness of training for the interpersonal skill of leadership. Management development programs traditionally encompass many other interpersonal skills areas and further research is needed to determine whether the results of this exploratory study are, in fact, generalizable to the normal scope of management development programs. Second, this study used college students as subjects, and future research, using field study designs, will be needed to determine if these results apply to organizational training efforts using actual employees. Furthermore, the possible effects of learning disabilities, learner variables, potential sex differences, and the effects of confounding variables such as social interaction, informal learning, and opportunity for team building on the effectiveness of training methods needs to be examined. Lastly, training time was held constant across groups as a method of controlling that particular confounding variable. It is possible that the results would have showed a

significant difference in training results among the various groups if training time had been permitted to fluctuate with the training method used. Groupbased workshops usually provide more than 2 hours of training, and limiting the workshop training in this study to 2 hours could have affected the training results for that group. Also, the use of training time for quality, intensely focused instruction is greater with computer-based training than it is with a group-based workshop where questions from trainees can be distracting and where sessions can easily get off task. Therefore, future research needs to examine the effects of training time and the use of training time as confounding variables.

While the results of this exploratory research imply that computer-based training, modified computer-based training, and group-based workshop training are equally viable training options, confirmatory research using field study designs and examining possible confounding variables and covariate factors is needed.

References

- Crabb, W.T., Moracco, J.C., and Bender, R.C. (1983). A comparative study of empathy training with programmed instruction for lay helpers. <u>Journal of</u> <u>Counseling Psychology</u>, <u>30</u>(2), 221-226.
- Davis, B.L. and Mount, M.K. (1984). Effectiveness of performance appraisal training using computer-assisted instruction and behavior modeling. <u>Personnel Psychology</u>, <u>37</u>, 439-452.
- DesLauriers, M.P., Hohn, R.L., and Clarke, G.M. (1980). Learner characteristics and performance effects in self-paced instruction for community college students. <u>Teaching of Psychology</u>, <u>7</u>(3), 161-163.
- Eurich, N.P. and Boyer, E.L. (1985). <u>Corporate classrooms: The learning</u> <u>business</u> (pp. 42-43). Lawrenceville, NJ: Carnegie Foundation for the Advancement of Teaching.
- Fowler, J.F. (1983). Use of computer-assisted instruction in introductory management science. <u>Journal of Experimental Education</u>, <u>52</u>(1), 22-26. Glasgow, Z. and Simkins, M. (1981). Comparison of self-paced and
- instructor-led job performance appraisal system training programs, <u>U.S.</u> <u>AFHRL Technical Report</u>, <u>#80-56</u>, 1-30.
- Higgins, E., Moracco, J., and Danford, D. (1981). Effects of human relations training on education students. Journal of Educational Research, 75(1), 22-25.
- Hohn, R., Lauriers, M., and Deaton, W. (1977). Learner's characteristics and performance effects in self-paced instruction. <u>Psychological Reports</u>, 40(3, Pt. 1), 1011-1012.

- Kearsley, G. and Hillelsohn, M. (1984). How and why (and why not) we use computer-based training. <u>Training and Development Journal</u>, <u>38</u>(1), 21-24.
- Mahoney, F.X. and Lyday, N.L. (1984). Design is what counts in computerbased training. <u>Training and Development Journal</u>, <u>38</u>(7), 40-41.
- Main, J. (1984). New ways to teach workers what's new. Fortune, <u>110</u>(7), 85-94.
- Mallory, W.J. (1981). Simulation for task practice in technical training. Training and Development Journal, 35(9), 13-20.
- Meyer, G. (1984). What every personnel manager should know about computers. Personnel Journal, <u>63</u>(8), 58-62.
- Miller, D.W. (1977). Student retention under self-paced and conventional instruction four years after the principles of macroeconomics course. Dissertation Abstracts International, <u>39</u>, 4673.
- Neider, L.L. (1981). Training effectiveness: Changing attitudes. <u>Training</u> and Development Journal, 35(12), 24-28.
- Ofiesh, G.D. (1965). <u>Programmed instruction: A guide for management</u> (p. 50). New York: American Management Association, Inc.
- Phillips, S.D. (1985). Trends and implications for training: Counselor training via computer. <u>Counselor Education and Supervision</u>, <u>24</u>(9), 20-28. Schwade, S. (1985). Is it time to consider computer-based training? Personnel Administrator, 30(2), 25-35.
- Smith, R.C. (1984, February). <u>Full-scale pilot testing of Florida's videodisc</u> <u>training project</u>. Paper presented at the meeting of the Society for Applied Learning Technology, Orlando, FL.

- Tickner, F. (1966). <u>Training in modern society: An international review</u> of training practices and procedures in government and industry (pp. 1-20, 109-123). Albany, NY: Graduate School of Business Affairs, State University of New York at Albany.
- Warren, M.W. (1979). Training for results: A systems approach for development
 of human resources in industry (pp. 77-81). Reading, MA: Addison-Wesley
 Publishing Co.

Table 1

Means and Standard Deviations for Dependent Variables

	Training Group								
	CBT (1)				CBTV (2	:)	GBW (3)		
Dependent Variables	N	x	SD	N	x	SD	N	x	SD
Conceptual Knowledge									
Pretest Scores	13	7.08	3.86	13	8.85	2.79	13	8.62	4.05
Posttest Scores	13	9.15	4.58	13	11.46	3.64	13	9.06	2.74
Applied Knowledge									
Pretest Scores	13	2.46	0.52	13	2.15	0.38	13	2.38	0.51
Posttest Scores	13	2.62	0.51	13	2.62	0.65	13	2.54	0.52

Table 2

Multivariate and Univariate Analyses Results

Main Effects	Wilks'	df	F	Dependent Variables	df	F	р
Group	0.88	(4,70)	1.11	Conceptual Knowledge	(2,36)	1.74	>.05
				Applied Knowledge	(2,36)	0.46	≻.05
Training	0.68	(2,35)	8.11*	Conceptual Knowledge	(1,36)	10.88	<.05
				Applied Knowledge	(1,36)	6.32	<.05
Group x							
Training	0.88	(4,70)	1.17	Conceptual Knowledge	(2,36)	0.81	7.05
				Applied Knowledge	(2,36)	1.01	7.05

Note. *indicates significance at the .05 level.

Table 3

Results of Analysis of Evaluation of Training Questionnaires

Question	Group	Mean	SD	Overall Mean	F	р
1	1	2.79	1.12	,,,,,,,		
	2	2.93	1.21			
	3	2.79	0.80	2.83	0.09	7.05
2a	1	2.75	1.06			
	2	2.86	0.95			
	3	2.42	0.90	2.68	0.71	7.05
2Ъ	1					•
	2	2.57	1.09			
	3	2.79	0.80	2.68	0.23	7.05
2c	1	2.00	0.96			
	2	2.07	1.21			
	3		——	2.04	0.03	>.05
2d	1					
	2					
	3	1.92	0.79	1.92		
3a	1	2.57	1.22			
&	2	2.79	1.12			
4a	3	2.62	0.65	2.68	0.23	>.05

24

table continues

Question	Group	Mean	SD	Overall Mean	F	р
Зb	1	1.71	0.92	·····		
	2	2.23	1.24	·		
	3		· _	1.96	1.54	>.05
Зс	1	4.07	0.92			
	2	4.21	0.89			
	3			4.14	0.17	>.05
3d	1	3.29	1.20			
æ	2	3.50	1.02			
4d	3	2.62	0.93	3.39	0.26	>.05
Зе	1	2.57	1.22			
&	2	2.36	0.84			
4e	3	2.08	0.76	2.34	0.88	7.05
3f	1	2.38	1.19			
&	2	2.23	0.83			
4f	3	2.38	0.77	2.33	0.11	∽.05
4Ъ	1					
	2		- -			
	3	2.77	0.93	2.77		
4c	1					
	2					
	3	2,92	0,79	2,92		

<u>Note</u>. -- indicates that a particular question did not pertain to that particular training group.

Appendix A

Leader Effectiveness and Adaptability Description (LEAD)

Assume YOU are involved in each of the following twelve situations. Read each item carefully. <u>Think</u> about what you would do in each circumstance. Then, record, in the space provided, the letter of the alternative action choice that YOU think would most closely describe your behavior in the situation presented. Record only one choice for each situation.

DO NOT respond to the items as if they were part of a test or in terms of what you think a leader or manager ought to do. Respond to the items in terms of the way you think you have behaved in the past when you were faced with situations similar to those described or in terms of the way you think you would behave if you were faced with each of the situations described. In reading each situation, interpret key concepts in terms of the environment or situation in which you most often think of yourself as assuming a leadership role. For example, when an item mentions subordinates, if you think that you engage in leader behavior most often as an officer of an organization, then think about your fellow club members as subordinates. If, however, you think of yourself as assuming a leadership role usually in informal situations with friends, think about your friends as your subordinates. If you have never really been in a leadership situation, respond to each situation in terms of what you think you would do if you were in a leadership position and you were faced with this situation. Do not change your situational frame of reference from one item to another.

Respond to the items sequentially; that is, do Item 1 before you do Item 2, and so on. Do not spend too much time; respond to each item as if you

were responding to a real life situation. Do not go back over any responses; stay with your original response!

Lead Questionnaire

- Your subordinates are no longer responding to your friendly conversation and obvious concern for their welfare. Their performance is declining rapidly.
 - A. Emphasize the use of uniform procedures and the necessity for task accomplishment.
 - B. Make yourself available for discussion, but don't push your involvement.
 - C. Talk with subordinates and then set goals.
 - D. Intentionally do not intervene.
- The observable performance of your group is increasing. You have been making sure that all members are aware of their responsibilities and expected standards of performance.
 - A. Engage in friendly interaction, but continue to make sure that all members are aware of their responsibilities and expected standards of performance.
 - B. Take no definite action.
 - C. Do what you can to make the group feel important and involved.
 - D. Emphasize the importance of deadlines and tasks.
- 3. Members of your group are unable to solve a problem themselves. You have normally left them alone. Group performance and

interpersonal relations have been good.

A. Work with the group and together engage in problem solving.

- B. Let the group work it out.
- C. Act quickly and firmly to correct and redirect.
- D. Encourage group to work on problem and be supportive of their efforts.
- You are considering a major change. Your subordinates have a fine record of accomplishment. They respect the need for change.
 - A. Allow group involvement in developing the change, but don't be too directive.
 - B. Announce changes and then implement with close supervision.
 - C. Allow group to formulate its own direction.
 - D. Incorporate group recommendations, but you direct the change.
- 5. The performance of your group has been dropping during the last few months. Members have been unconcerned with meeting objectives. Redefining roles and responsibilities has helped in the past. They have continually needed reminding to have their tasks done on time.
 - A. Allow group to formulate its own direction.
 - B. Incorporate group recommendations, but see that objectives are met.
 - C. Redefine roles and responsibilities and supervise carefully.
 - D. Allow group involvement in determining roles and responsibilities, but don't be too directive.

29

- 6. You stepped into an efficiently run organization, which the previous administrator tightly controlled. You want to maintain a productive situation, but you would like to begin humanizing the environment.
 - A. Do what you can to make group feel important and involved.
 - B. Emphasize the importance of deadlines and tasks.
 - C. Intentionally do not intervene.
 - D. Get group involved in decision making, but see the objectives are met.
- 7. You are considering changing to a structure that will be new to your group. Members of the group have made suggestions about needed change. The group has been productive and demonstrated flexibility in its operations.

A. Define the change and supervise carefully.

- B. Participate with the group in developing the change but allow members to organize the implementation.
- C. Be willing to make changes as recommended, but maintain control of implementation.
- D. Avoid confrontation; leave things alone.
- 8. Group performance and interpersonal relations are good. You feel somewhat unsure about your lack of direction of the group.
 - A. Leave the group alone.
 - B. Discuss the situation with the group and then you initiate necessary changes.

- C. Take steps to direct subordinates toward working in a well-directed manner.
- D. Be supportive in discussing the situation with the group but not too directive.
- 9. Your superior has appointed you to head a task force that is far overdue in making requested recommendations for change. The group is not clear on its goals. Attendance at sessions has been poor. Their meetings have turned into social gatherings. Potentially they have the talent necessary to help.
 - A. Let the group work out its problems.
 - B. Incorporate group recommendations, but see that objectives are met.
 - C. Redefine goals and supervise carefully.
 - D. Allow group involvement in setting goals, but don't push.
- 10. Your subordinates, usually able to take responsibility, are not responding to your recent redefining of standards.
 - A. Allow group involvement in redefining standards, but do not take control.
 - B. Redefine standards and supervise carefully.
 - C. Avoid confrontation by not applying pressure; leave situation alone.
 - D. Incorporate group recommendations, but see that new standards are met.
- 11. You have been promoted to a new position. The previous supervisor was uninvolved in the affairs of the group. The group has

adequately handled its tasks and directions. Group interrelations are good.

- A. Take steps to direct subordinates toward working in a well-defined manner.
- B. Involve subordinates in decision making and reinforce good contributions.
- C. Discuss past performance with the group and then you examine the need for new practices.
- D. Continue to leave group alone.
- 12. Recent information indicates some internal difficulties among subordinates. The group has a remarkable record of accomplishment. Members have effectively maintained long-range goals. They have worked in harmony for the past year. All are well qualified for the task.
 - A. Try out your solution with subordinates and examine the need for new practices.
 - B. Allow group members to work it out themselves.
 - C. Act quickly and firmly to correct and redirect.
 - D. Participate in problem discussion while providing support for subordinates.

Appendix B

Pretest Situational Discussion Question

In approximately 150 words, describe the steps you would take to handle the situation described below. Include a brief explanation of your rationale for your chosen course of action, and your expectations of results.

Charles Hancock, age 51, has spent twenty years with the company and works about fifty-five hours per week. While he appears to be a hard worker in terms of the number of hours he puts in, he has already peaked out at a mediocre level of production. In recent years, he has established a slower and more deliberate pace of activities, but is very detail-oriented and exacting. Charlie has taken on the role of a helpful father figure to new-comers, spending many hours every week on tasks that are personally rewardi**ng but not a p**art of his duties. Clients have complained that Charlie is not aggressive enough in seeking high-flying investments and that he is overly cautious. Several have asked to be assigned a broker who will be more of a risk-taker. As the manager, what action would you take? Describe in detail the steps you would take, explaining your reasoning and the results you would expect.

Appendix C

Situational Exercise Scoring Form

DelegationEffectivene	ess in	the us	se of s	ubordi	nate b	y assigning appropriate
work accompanied by add	equate	inform	nation	and in	struct	ions to accomplish task
Assigned inappropriate	1	2	3	4	5	Assigned appropriate
tasks to subordinate						tasks to subordinate
Gave vague instruc-	1	2	3	4	5	Gave explicit instruc-
tions						tions
Gave no explanation	1	2	3	4	5	Gave full explanations
as to reasons behind						of the reasons behind
the delegated actions						the delegated actions
Failed to set explicit	1	2	3	4	5	Set explicit expectations
expectations						
Management ControlEff	ectiv	eness i	ln esta	blishi	ng met	hods of control and
monitoring results and	activ	ities c	of subc	rdinat	e to e	nsure that objectives
and directives are met						
No follow-up plan	1	2	3	4	5	Laid out specific follow-
outlined						up plan
No requests for	1	2	3	4	5	Asked for future progress
progress reports/no			•			reports/set up monitoring
monitoring procedures						procedures
set						
InfluencingEffectiven	ess ir	n guidi	ng ind	ividua	l towa:	rd task accomplishment
Failed to establish	1	2	3	4	5	Established courses of

courses of action

action

```
Leadership Skills Training
```

Avoided obtaining	1	2	3	4	5	Encouraged subordinate
important information						to contribute information
from subordinate						
Presented ideas in a	1	2	3	4	5	Presented ideas in non-
way that would put						threatening way
subordinate on defensive	2					
Avoided resolution of	1	2	3	4	5	Tried to resolve the
conflict						conflict
SensitivityEffectivene	ess in	respon	ding	to the	subord	inate's needs and feelings
and in demonstrating emp	athy					
Ignoring subordinate's	1	2	3	4	5	Acknowledged subordinate's
point of view						point of view
No reasons given for	1	2	3	4	5	Gave reasons for point
point of view						of view
Impolite and defensive	1	2	3	4	5	Polite and non-defensive
Gave no specific	1	2	3	4	5	Gave specific examples
examples of problem						of problem
				OVERALL	SCORE	

.

Appendix D

Posttest Situational Discussion Question

In approximately 150 words, describe the steps you would take to handle the situation described below. Include a brief explanation of your rationale for your chosen course of action, and your expectations of results.

Joann Thompson, a 27-year old account executive, showed a great deal of promise during her first twenty-eight months with the firm. She seemed very energetic, enthusiastic, self-confident, and eager to learn. Her production was high and mid-level managers, when talking among themselves, often used her as an example of someone who really had the personal traits plus the financial know-how to become a real superstar in the company. However, in recent months people have noticed that she has not been as enthusiastic about her work as she used to be and has been showing an unusual inattention to detail. Her production has dropped off and she seems rather passive. Some feel that she is bored with her job. How would you handle this situation? Describe in detail the steps you would take, explaining your reasoning and the results you would expect.

Appendix E

Evaluation of Training Questionnaire

1.	How	interesting was	the co	ourse i	ln gene	eral?					
	Int	eresting	1	2	3	4	5	Boring			
2.	How	effective were	the fol	llowing	g mater	ials :	in help	oing you learn?			
	a.	a. Practical exercises in the workbook									
		Effective	1	2	3	4	5	Ineffective			
	b.	Videotapes (if applicable)									
		Effective	1	2	3	4	5	Ineffective			
	с.	Microcomputer p	rogram	(if ap	plicat	ole)					
		Effective	1	2	3	4	5	Ineffective			
	đ.	Trainer's presen	ntation	n (if a	upplica	able)					
		Effective	1.	2	3	4	5	Ineffective			
3.	If	you participated	inac	compute	er-base	ed tra:	ining p	program,			
	a.	How well did you	ı like	this p	articu	ılar tı	raining	; method?			
		Very much	1	2	3	4	5	Not at all			
	Ъ.	How well did you	ı like	workin	ig inde	epender	ntly?				
		Very much	1	2	3	4	5	Not at all			
	c.	How often did yo	ou have	e quest	ions t	hat ne	either	the microcomputer			
		program nor the	accomp	anying	workb	ook ad	ldresse	d?			
		Very often	1	2	3	4	5	Rarely			
	d.	How often would	you li	ke to	partic	ipate	in thi	s type of training?			
		Frequently	1	2	3	4	5	Rarely			
	e.	How well do you	feel y	ou lea	rned t	he bas	sic und	erlying concepts of			
		the training module?									

		Very well	1	2	3	4	5	Not at all
	f.	How well do you	feel t	he tra	ining	module	prepa	red you to make
		practical applic	ations	of yo	ur new	knowl	edge?	·
		Very well	1	2	3	4	5	Not at all
4.	If	you participated	in the	group	-based	train	ing wo	rkshop,
	a.	How well did you	like	this p	articu	lar tra	aining	method?
		Very much	1	2	3	4	5	Not at all
	b.	How effective wa	s grou	p inte	ractio	n in su	upport	ing the instruction?
		Very effective	1	2	3	4	5	Ineffective
	c.	How effective wa	s your	parti	cipati	on in s	suppor	ting the instruction?
		Very effective	1	2	3	4	5	Ineffective
	d.	How often would	you li	ke to j	partic	ipate :	in thi	s type of training?
		Frequently	1.	2	3	4	5	Rarely
	e.	How well do you	feel y	ou lea	rned t	he bas:	ic und	erlying concepts of
		the training mod	ule?					
		Very well	1	2	3	4	5	Not at all
	f.	How well do you	feel t	he tra	ining 1	nodule	prepa	red you to make
		practical applic	ations	of you	ur new	know1e	edge?	
		Very well	1	2	3	4	5	Not at all