

THE USE OF COST BENEFIT ANALYSIS ON ACTION  
TASK AND COGNITIVE TASK TRAINING  
IN THE FORTUNE 200  
INDUSTRIES

By

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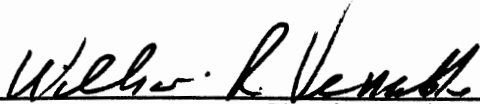
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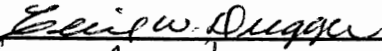
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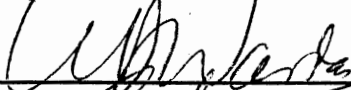
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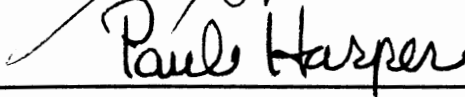
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## CHAPTER I

### INTRODUCTION

The decade of the 1980's has seen the human resource development profession challenged with expanding roles in training human resources to help resolve major problems within the organization that affect its overall economics.

Training expenditures by industry have been estimated to be in the billions. Finkel (1987) gave insight into the size of these expenditures when he reported that companies in this country spent at least \$100 billion each year for training. Recently the American Society for Training and Development (ASTD) estimated that corporations spend a total of \$210 billion per year on formal and informal training.

The American Management Association Handbook (AMAHB) described the situation which industry was facing in this manner:

. . . economic constraints, including those caused by inflation, tight money, and internal competition for available funds, are forcing top executives to make difficult decisions. The people-intensive nature of training and development and the high costs of providing training services are causing many top managers to demand efficiency in the conduct of training and development activities. In addition to requiring proof of the cost effectiveness of programs and services, executives and board directors are now demanding that training and development activities show cost benefits directly related to the enterprise's bottom-line results (Fallon, 1983, pp. 7-66).

Literature in the last decade and a half has highlighted the need for training directors to adopt cost benefit analysis techniques that would prove the worth of their training (Fallon, 1983; Fowler, 1983; Hoffman, F., 1984; Kearsley, 1984; Birnbrauer, 1987; Suessmuth, 1976; Dalb, Fenn, Oberlin, and Schwandt, 1988; Shipp, 1980).

Some articles showed the efforts of individual training activities to be cost effective (Cohen, 1985; Hoffman, F.M.m 1984; Pruitt, 1982; Sovie, 1980; McCampbell, 1979; Veninga, 1984).

Other authors provided approaches or models useful in the development of cost benefit analysis systems for training programs (Burack and Mathys, 1980; Dopyea and Pitone, 1983; Grenough and Dixon, 1982; Kaufman, 1987; Pattan, 1986; Kearsley, 1984; Kesner and Dalton, 1982; Leiter, 1975; Preziosi and Legg, 1983; Shoemaker, 1979; Summers, 1984; Tartell, 1987; Tyler, 1986; and Weiss, 1981).

#### Statement of the Problem

The problem this study addressed was that information about how corporate training departments established the value of action task training and cognitive task training was not available to other training professionals for a better understanding of contemporary practice.

#### Purpose of the Research

The purpose of this study was to find out whether and how directors of training in the Fortune 200 industries conduct cost benefit analysis on action task and cognitive task training.

### Statement of Need

Training directors need to know how to determine benefits for their training programs to ensure that they are responsive to needs and are cost effective. Sharing basic information on techniques used for cost benefit analysis of training with other training professionals provides a good source of knowledge on current practice and a basis for comparison of their programs to others in the same or related training fields.

### Research Questions

This study was designed to answer the following basic questions about the use of cost benefit analysis (CBA) on the respondent's action task training (ATT) and cognitive task training (CTT) in the last two years.

1. Did the study respondents use any formal or informal CBA on any of their training?
2. Did the study respondents use CBA for their ATT?
3. Did the study respondents use CBA for their CTT?
4. What was the relationship between ATT and CTT with regard to the use of CBA?
5. What was the relationship between ATT and CTT with regard to important criteria for application of CBA?
6. What was the relationship between ATT and CTT with regard to the usefulness of CBA results?
7. What was the relationship of ATT and CTT with regard to the schedule for conducting CBA?

8. What was the relationship of ATT and CTT with regard to the satisfaction with results of CBA?

9. What was the relationship of responses on demographic questions to responses on use or non-use of cost benefit analysis questions?

#### Assumptions

The assumptions of this study were the following.

1. The respondents were the directors of training in the population studied.

2. The population studied may not be representative of other training directors and therefore may not be generalizable for all like populations.

3. Further research may be required to determine the use of cost benefit analysis for other types of training and organizations.

#### Limitations of the Study

The limitations of the study were the following.

1. The directors of training under study were limited to those in the Fortune 200 industries population.

2. The study was limited to the use of cost benefit analysis for the variables selected on action task training and cognitive task training.

#### Scope of the Study

The scope of this study was primarily to gather needed information from a population of directors of training on present practice of use

of cost benefit analysis for action task training and cognitive task training.

### Definitions

For purposes of this study, the following definitions of terms are furnished.

ACTION TASK TRAINING is training to perform motor or manual physical skill centered activity. In this task each step is specific, observable, measurable and is performed in a relatively short period of time. It has a beginning and end and is independent of other actions. Each person who performs the task follows the same set of actions to achieve the same outcome or goal. An action task is a series of actions or behaviors which involve interaction between a person (the performer) and an object or another person. The task changes the object or person in some way. It accomplished a goal (Reddout, 1987). Most technical training parallels action task training.

COGNITIVE TASK TRAINING is training to perform mentally. Cognitive behaviors include the processes of evaluating, deciding or discriminating. These mental processes are not observable and do not follow a precise order that is easily definable or measurable. Most management training parallels cognitive task training.

COST ACCOUNTING is the phase of accounting which is particularly concerned with collecting, maintaining, and interpreting cost data.

COST BENEFIT ANALYSIS is any report resulting from a system of comparing company costs to results of training. An example of cost benefit analysis for training is the process of comparing expected expenses to the potential advantages of implementing a new training

program in the organization.

DIRECTOR OF TRAINING is the administrator of training, in house consultant on training, designer of learning experiences, and head of instruction. The director of training helps managers of "client" departments to solve human performance problems and supports top management to attain organizational, economic, and other goals involved with training human resources (Laird, 1984).

HUMAN RESOURCE DEVELOPMENT is the department which is responsible for planning, organizing, directing, approving, controlling, and delivering the ongoing functions relevant to the formal training of human resources (Laird, 1984).

MANAGEMENT TRAINING usually parallels cognitive task training. Such tasks are to evaluate, decide, discriminate, and direct. Management training is usually used to perform mental tasks.

TASK is a meaningful unit of work activity generally performed on the job by one worker within a limited period of time. A task is logical and necessary to achieving a single objective or output (AAVIM, 1981). A task is series of actions or behaviors which accomplishes a goal. For purposes of this study, tasks are divided into two major types, action tasks and cognitive tasks (Reddout, 1987).

TECHNICAL TRAINING is training to perform manual, motor, and physical tasks that achieve a single objective or output. It incorporates steps that are observable and measurable. Most formal technical training parallels action task training.



### Summary

There is a need within organizations for human resource development departments to become cost effective and show cost benefits directly related to the organization's bottom-line economic results.

There has been a lack of collective research information about how training directors determine the value of their training.

The study addressed a population of directors of training in the Fortune 200 industries in order to gather needed information about the use of cost benefit analysis techniques on their action task and cognitive task training. The results of this study could provide training administrators and practitioners with a better understanding of current practice.

## CHAPTER II

### REVIEW OF LITERATURE

#### Historical Background

The rising expectation that training directors should demonstrate the cost effectiveness of their programs within their organizations has emerged as a by-product of more than a decade of changing situations in industry. Industry during this period was faced with rapid technological changes, declining productivity, increased competition, quality problems, higher costs, limited funds, and with equipment and facilities that were becoming obsolete.

Top managers, under pressure from boards, have moved to resolve the economic problems their companies were confronting. Training was seen as a major resource needed to help resolve these problems.

The human resource development activities have been advised to become a means of reaching organizational goals rather than an end in themselves. They were also to be viewed as cost centers where expenditures for training and development should be tracked, and recorded and the return on investment measured (Fallon, 1983).

Carnevale (1982) gave national perspective to this new and expanded importance of training by explaining "an emerging and expanded economic policy recognizes the nation's public and private training systems as full partners in economic policy" (p. 41).

Literature in the last decade had included many articles which described the challenges that went with the new and expanding roles of the directors of training becoming full partners in economic policy. A knowledge of basic cost accounting theory has been suggested as helpful in understanding approaches to application of cost benefit analysis techniques.

#### Reaction to Use of Cost Accounting and Benefit Analysis

Shipp (1981) explained the initial reaction of many trainers confronted with the need to become cost centers and to apply cost benefit analysis systems to their training programs.

The agitation created by the requirement to show a return-on-investment is not caused by a fear that continuing education does not pay off in measurable terms, but rather stems from a lack of formal training in cost accounting techniques and a normal hesitation to plunge into the unknown (p. 6).

Meigs and Meigs (1981) conveyed two very important managerial objectives of cost accounting. They were (1) to determine the unit costs of production, and (2) to provide management with information useful in controlling the costs of business operations. A common misconception about accounting figures is that the cost of any product or unit of output can be measured with precision. There are two reasons for the difficulty in measuring accurately the cost of anything: First, the relationship between the costs incurred and the output product is often difficult to establish. Secondly, cost information may be assembled, combined, and reported in many different ways. The relevant "cost" information varies with the nature of the decision confronting management.

Meigs and Meigs (1981) reported on definition of cost:

No single definition of cost is ideally suited for all types of managerial decisions. If costs information is to be used intelligently, the user must understand that any cost figure has inherent limitations and that no single method of arriving at the cost will serve equally well for all the varied purposes for which such information is needed. Most systems are designed to meet the general purposes of income determinations and to develop in the accounts the basic information from which cost studies for special purposes can be derived (p. 932).

Kieso and Weygandt (1980) explained that an information accounting theory is based on the concept that all accounting reporting decisions should be within a cost benefit framework to be evaluated. Accounting information should be thought of as a commodity, just as bread and butter are commodities; and the costs of producing this commodity and its benefits should be questioned.

Some training programs may have to be evaluated based on benefit criteria when costs cannot accurately be determined. Kirrane (1986) pointed out that the intangible nature of some training benefits is slowly becoming less of an issue for human resource managers who can prove the long-term value of their programs. Manufacturers provide some advice on one approach. The strategic plan for the company should be considered, and a justification should be developed. Although intangible benefits may be difficult to quantify, there is no reasons to value them at zero. No responsible accountant would say that an enterprise can afford to ignore costs. Managers still must figure out how to pay the bills. But management accounting and its sub-category, cost accounting are meant to provide financial information needed for sound decision making.

## Gathering Criteria for Cost Evaluation of Training

Training directors have to gather criteria necessary for development of a cost evaluation system for training. Much of this criteria is available during the planning stages of the program. These include such documentation as the training request, needs assessment, performance tasks, performance standards, training objectives, and cost information.

The requirement to use basic cost accounting theory and develop criteria needed for cost analysis of a training program is said to be a logical process which should be agreed upon before the program starts.

In Dabl, Fenn, Oberlin, and Schwandt (1988), Schwandt advised:

. . . so many times I've seen people jump to set up their accounting systems. But this can become incredibly labor-intensive if you don't have a source database to pull your figures from. You'll continually have to redo your database. Attempt to tie in to the larger system so accounting doesn't become a cost to you that you cannot bear (p. 25).

Knowing what the organization expects from a particular cost benefit analysis exercise can help provide for proper evaluation. In Dabl, et al. (1988), Oberlin explained, "If you don't understand what management is measuring, how can you ever hope to affect it? " He recommended, "the first thing in an accounting system is to get the big picture. Know what you're dealing with" (p. 23).

Without such action it could be frustrating to explain the validity of the cost system. The literature addresses many variables to cost benefit analysis system's development and provides insight into approaches.

Minick and Medlin (1983) related that anticipatory evaluation emphasizes the role of evaluating objectives in planning human resource development programs. In this integrated approach, evaluation begins before the program is designed and continues throughout development and implementation (p. 89).

Often, more than training costs are involved in conducting cost benefit analysis for a training program. The difficulty in determining what is involved may be caused by the lack of adequate front-end planning.

Kaufman (1987) listed as a first step the decision to use data from a needs assessment.

Planning is a substitute for good luck. A needs assessment may be described as a blueprint for action that includes the functions an organization must complete to get from where it is to where it wants to be . . . . Needs assessments provide cost effective alternatives (pp. 78 and 83).

Katz and Rosen (1987) explained how one company used a specialized needs assessment to help its technical people to become better managers. They concluded that, needless-to-say, this requires the ability to do an appropriate front-end analysis using a design that encourages fact finding, flexibility, and an action plan for implementation.

Topics of major concern to executives, which were taken from Opinion Research Corporation's "Executive Caravan Survey" in 1984, were reported by Fisher (1986). The major concerns ranked first and second were controlling costs and improving profits, respectively.

Hall (1987) indicated that concerning corporate needs, the corporation has important though indirect roles to play in planning carried out by managers of business units, especially training. These

managers do not automatically become sophisticated strategic planners. The corporation must provide an intellectual framework on which their knowledge of the business and its environment can be arranged.

Finkelstein and Hatch (1987) concluded that for decades the process of job evaluation has seen little change. Most companies still rely on methods that were developed years ago to serve the common need of an industrial economy.

On the need for top management support and how to get it, Yeoman (1982) has advised that:

Top management support is a continuing commitment, backed by words and deeds over a long period of time. . . . it will not happen without setbacks and frustrations, but it can be done. Top managers support things that make sense and help them accomplish organizational objectives. . . . to get top management's support get a handle on return on investment and make some 'hardnosed' decisions. Say 'no' to training requests that represent problems that training cannot resolve (p. 38-40).

A paramount need is support from the organization and to that extent cost effectiveness is a matter of organizational philosophy. Fitz-ens (1984) has suggested that a purpose statement of the human resource development department should relate to the organizational philosophy. For example, human resource development exist in an organization because it provides a necessary function at competitive costs.

The human resources development department is to operate as an organizational entity. Many authors have made a point of describing and emphasizing this need. Bell (1983) reported that successful trainers start with alignment to the role and mission of the total organization and find that this helps them succeed during tough economic times.

del Bueno and Kelly (1980) described a ratio formula that facilitates computation of cost effectiveness of staff development programs and activities. They also provided an account of how the formula was applied in one hospital, and included work sheets for educators to use in determining their own department's cost effectiveness.

Grubb (1981) supported the point that hospital educators need to become more involved in conducting research illustrating the efficacy both of the hospital's education function and the educational manager's role in contributing to the hospital's organizational development and effectiveness. Hill (1984) related on technical training that the person responsible for skills training in an industry has a greater role to play than simply linking hardware and people. The training department should also contribute to the organization's productivity.

Carnevale and Shultz (1988, p. 18) contended, "Technical employees and technical training are becoming ever more important because they are the key to America's competitive advantage in the world economy."

Smith (1980, p. 74) suggested that "accountability means requiring the training staff to produce documented evidence of training quality and efficiency on a regular and periodic basis."

Lamrie (1986) has suggested that for a proactive approach to human resource development requires assessment of skills and attitudes, review and diagnoses, an evaluation period, implementation of training, and evaluation of results.

Rothwell (1984, p. 45) has suggested that "performance audits should be viewed as extensions of traditional auditing dealing with broad issues of organizational efficiency and effectiveness. They



should focus on organizational outcomes in lieu of individual outcomes. Performance analysis has been described to be closely related to estimating the costs of requested programs. The process of determining the costs of a program helps to visualize exactly what a given program is worth in terms of education (McC Campbell, 1979).

According to Dobbs (1980), management of a training program must assess where it is going. "There is little question that training technology is advancing more than ever before. Organizations are expecting more and more benefits from their training dollar" (p. 20). Knowles (1985, p. 24) has professed that "thinking in 'wholes' or systems has become a necessity in an increasingly complex world."

As companies devote more resources to training, the need for valid information about the return on investment increases (Brakken and Bernstein, 1982). Weinstein (1982, p. 34) cautioned that, "logical and coherent structure of cost data is vital in arriving at an accurate analysis of training cost effectiveness." Urban, Ferris, Crowe and Miller (1985, p. 68) concluded that, "effective evaluation of the training functions remains one of the most difficult problems in the human resource development field."

Murk and Wells (1988) observed that

Most traditional program planning modes for continuing professional training are linear in design. An extensive review of literature reveals that most contain seven sequential steps: assessing needs, establishing program priorities and responsibilities, selecting program goals and objectives, allocating available resources, selecting appropriate teaching and techniques, evaluating the results or outcomes, and determining the program's effectiveness (p. 45).

### Models and Analysis

Literature has pointed out that training requires a front-end analysis to review the criteria applicable to the objectives and purposes of the specific program. This is a process said to be critical to determine if the training will be conducted and under what criteria. The consideration of need for the application of cost benefit analysis to the specific program is no less important than other considerations during the front end-analysis if it is to be grounded in validity and reliability.

Many models of cost benefit analysis have been suggested in the literature. Most models are tools which require assessment, tailoring and pre-testing prior to use on a training program.

Kearsley and Compton (1981) advised that cost benefit models, like statistics, are inferential tools. They are intended to help the training manager gain a better understanding of what-effects-what in a training system. Models should relate to the specifics of a training department's program to be able to show validity of the cost analysis system applied.

Sullivan and Elenburg (1988) contended that designing and developing technical training programs without attention to measuring the effectiveness of training is a thing of the past. They suggested the use of valid and reliable performance tests. Performance tests are based on objectives developed during the task analysis process and then presented at the beginning of training. Task analysis includes the cognitive (what you know), psychomotor (what you do), and affective (what you feel) domains that form performance and enabling objectives.

Kirkpatrick (1975, p. 1) pointed out that "one training director can not borrow evaluation results from another; he can, however, borrow evaluation techniques." Kirkpatrick identified four evaluation steps: reaction, learning, behavior, and results.

Lawson (1981) clarified three basic causes of the success of human resource development functions from an internal marketing perspective. They are functions actively rendering services in the right "client segments" of their organization; functions doing a few important tasks well; and functions doing the right things consistently.

Kearsley and Compton (1981) listed three major roles cost benefit analysis plays in training: (1) for planning to estimate anticipated costs of training programs, (2) for selecting purposes to evaluate one training approach relative to another in terms of cost and outcomes, and (3) for justification to measure the effects of a particular training program, especially in terms of improved job performance. Different cost/benefit models are developed to meet these different purposes.

Shipp (1981) addressed the need for the systematic method of assessing the worth or impact of an educational program, which led to his development of a cost benefit effectiveness model. The model classifies costs and results as monetarily quantifiable., non-monetarily quantifiable, and non-quantifiable. Cohen (1985) presented administrators and practitioners with a simple approach to cost benefit analysis of industrial training that uses easily obtainable data. The results were related to the social rate of return to company training.

Salinger and Deming (1982) described six critical items in the evaluation of training: (1) delayed treatment, (2) modified critical

incident, (3) follow-ups, (4) performance analysis, (5) time series evaluation, and (6) cost benefit analysis.

Barta (1982, p. 16) discussed "three methods which trainers can use to justify the investment and review the literature to show both appropriate and inappropriate applications of the three approaches: return on investment, benefits-costs, and payback methods.

Weinstein and Kasl (1982) contributed an article describing a method to convert total dollar figures on a training program to "Participant Learning Hour" or PLH cost. Weinstein (1982) provided a Training Cost Framework or model for gathering training cost information into three levels: Classroom, Administration, and Organization.

Paquet, Kasl, Weinstein and Waite (1987) reported on a difficult training area to evaluate "management." They revealed that practitioners believe that management training makes a real difference in the work place, but many avoid proving it. They show how one company designed a model which showed that management benefits through the work of employees. These efforts were predicted on the assumption that the intended outcomes of management training is improved productivity in the work place.

Kirkpatrick (1988) noted that books and articles about supervisory and management training are stressing the same thing that Larry Appley, former president of the American Management Association (AMA), stressed years ago which he designed as, "getting things done through people." The literature emphasizes that an effective manager must be able to communicate, motivate, train, delegate, coach, and control.

Spencer (1984) reported that for years the human resource development community has been expressing the difficulty of the impact of human resource development programs in cost/benefit terms. He presented a method for calculating the costs and benefits of training.

Kearsley (1984) outlined a series of ten steps for conducting cost benefit analysis: (1) Define the problems, (2) Select and formulate a model; (3) Identify data requirements, (4) Identify data collection methods, (5) Develop data collection tools, (6) Pilot data collection, (7) Conduct a full scale collection, (8) Verify/validate data, recollecting where applicable; (9) Apply model to data, and (10) Draw inferences and conclusions, revising where required.

Clegg (1987) reported that although management training is often a difficult process, it must be done. Management training requires an investment of time and money which, like any other type of investment, must be justified on the basis of return from that investment. Results of the study indicate that evaluation of management training is still not what it could be. Stephan, Mills, Pace, and Ralphs (1988) asked one question about return on investment of management training in a survey about Fortune Industry executive training. The response indicated that evaluation of return on management training investment did not occur with high regularity.

#### Summary

Industry during the last decade has been faced with rapid technological changes, declining productivity, increased competition, quality programs, higher costs, limited funds, and equipment and facilities that were becoming obsolete.

Top managers have moved to resolve the problems. The training department was seen as a major resource to help resolve the industries' economic problems.

Human resource development activities have assumed major roles in support of organizational training and economics. They have been expected to function as cost centers where the expenditures would be tracked and recorded and the return on investment measured. Reaction to the challenge has required training activities to establish systems using cost accounting theory to prove the value of their training. Also, they have had to gather needed criteria to perform a front-end analysis of training and related costs for use in establishing and validating the reliability of a cost benefit analysis model established for training.

Approaches and models for cost benefit analysis of training have been suggested in the literature. Some training has been reported to be more applicable than other training to cost analysis systems. Training which has observable and measurable steps, such as action task training's motor, physical or manual skills centered activity, is usually adaptable to cost benefit analysis. Cognitive task training or mental training to decide, discriminate, and direct, is not usually observable and measurable. Therefore, it is not easily adaptable to cost benefit analysis.

For a better understanding of current practice about utilization of cost benefit analysis for training, it was considered necessary to gather needed information from a population of directors of training. This study addressed the research need for two types of training, action task and cognitive task training.

## CHAPTER III

### METHODOLOGY

The purpose of this study was to find out whether and how directors of training in the Fortune 200 industries conduct cost benefit analysis on action task and cognitive training.

According to the literature review, training directors need to know how to determine benefits for their training programs to ensure that they are responsible to needs and are cost effective. The results of this study, based on responses from the directors of training surveyed, could help provide training administrators, educators, and practitioners a better understanding of contemporary practice. The study was supported by the Center for Human Resource Development, Oklahoma State University; members of the American Society for Training and Development, Oklahoma Central Chapter, who participated in the pilot test study; and the Oklahoma State University Technical Branch, Directorate of Industrial and Business Relations.

The chapter is divided into four sections: (1) research questions, (2) description of the population, (3) description of the instrument for data collection, and (4) description of procedures for analyzing the data.

### Research Questions

Nine research questions were compiled for use in the study. The research questions considered whether or not the population utilized cost benefit analysis (CBA) on any training formally or informally in the last two years. Questions were then concentrated specifically on action task training (ATT) and cognitive task training (CTT) with regard to utilization of cost benefit analysis in the last two years. The research questions were the following:

1. Did the study respondents use any formal or informal CBA on any of their training?
2. Did the study respondents use CBA for their ATT?
3. Did the study respondents use CBA for their CTT?
4. What was the relationship between ATT and CTT with regard to the use of CBA?
5. What was the relationship between ATT and CTT with regard to important criteria for application of CBA?
6. What was the relationship between ATT and CTT with regard to usefulness of CBA results?
7. What was the relationship of ATT and CTT with regard to the schedule for conducting CBA?
8. What was the relationship of ATT and CTT with regard to the satisfaction with results of CBA?
9. What was the relationship of responses on demographics questions to responses on use or non-use of CBA?

The questionnaire was designed to answer the basic research questions. Consideration was given to the relationships of the responses to ATT and CTT training. Consideration was also given to the



relationships of responses on demographics to responses on use or non-use of cost benefit analysis for training. Appendix D shows a cross reference of research questions to the questionnaire.

#### Selection of Population

The population selected for this study was composed of the directors of training for the Fortune 200 industries. A universe type population of  $n=200$  was used because these industries were rated as some of the most successful companies in America (Loeb, 1987, Vittolino, 1989). These industries have large training programs supporting large numbers of employees. They are deeply involved with technical production, supervision, and management of large, dispersed, complex organizations.

This effort to gather needed information not previously available was directed to those who were most likely to understand the questions and who had considerable experience and expertise in the administration of industrial training.

#### Collection of Data

The information used in this study for collection of data was developed from a review of literature. An ERIC search was performed, followed by library research of literature and consultation with industrial, educational, and human resource development professionals.

A suitable instrument was not available to conduct this descriptive study. An instrument was developed by the researcher based on important basic material in the literature review and on suggestions of experts in human resource development who reviewed the instrument's

content and purposes. The questionnaire was structured using guidance in Zemke and Kramlinger (1984), Isaac and Michael (1981), Key (1986), Gay (1981), Educational Research Competencies for Analysis and Application, and other references.

The questionnaire was reviewed by my committee members, Dr. William Venable, Chairperson; Dr. Cecil Dugger, Professor of Technical Education, Dr. Jerry Davis, Professor of Technical Education, Dr. William Warde, Professor of Statistics; and Dr. Paul Harper, Professor of Speech Communications.

The questionnaire was also reviewed by three other training professionals: Dr. Margaret Christensen, President of Human Resource Consultants, Incorporated, Edmond, Oklahoma; Dr. William Nelson, Director of Industrial and Business Relations, Oklahoma State University Technical Branch, Oklahoma City, Oklahoma; Dr. Dale Fredericksen, Assistant Director of Continuing Education, Rose State College, Midwest City, Oklahoma. Several changes were made as a result of these reviews.

The questionnaire draft was then pilot tested for reliability on a group of 15 directors of training or equivalent training administrators in Oklahoma industries. The respondents were all professional training managers with many years of experience. Some of the industries were local divisions of Fortune companies. Many had large, diverse training programs serving large number of employees. These training directors were highly educated and were familiar with technical and management type training as well as with its relationship to action task and cognitive task training. The pilot-test documentation is shown in Appendixes E and F. The results of the local pilot-test for

reliability testing of the instrument is reported in Appendix G. These results and recommendations were reviewed and final refinements to the survey instrument were made (See Appendixes A, B, and C).

The two major types of task training, action task and cognitive task training, were adapted and developed from domains explained by Laird (1984) on Bloom's Taxonomy of Education; Reddout's (1987) definitions of action tasks and cognitive tasks; American Association for Vocational Instructional Material (1981) on task performance; and Sullivan and Elenburg's (1988) description of task analysis and enabling objectives.

#### Methods and Analysis

The questionnaires were mailed in June, 1989, with a cover letter and instructions. (See Appendix A for the cover letter; Appendix B for questionnaire instructions; and Appendix C for the questionnaire). The questionnaires were addressed to the director of training in the Fortune 200 industries (statistically a universe population,  $n=200$ ). Of the questionnaires mailed, 28 percent were returned by the due date stated in the cover letter.

A first follow-up was made in July, 1989 to non-respondents by mail. Another five percent of the questionnaires were returned. A second follow-up was made by mail in August and three percent more of the questionnaires were returned. A final follow-up effort was made by telephone resulting in a return of two percent additional questionnaires. A total of 76 or 38 percent of the questionnaires were completed and returned from the population studied. The nature of the study, level of the population, and summer vacation period were some of

the factors that affected the return of the questionnaires. Following these efforts to obtain a maximum possible return, the questionnaires were tallied and analyzed. (See Appendix D).

Descriptive research, according to Key (1986), is used to obtain information concerning the current status of the phenomena. The purpose of the methods are to describe "what exists" with respect to variables or conditions in the situation. These methods also may investigate the relationships between variables.

The results of this descriptive study were tallied. Analysis of results of responses was shown in frequency distribution tables. Cross tabulations of responses for action task and cognitive task training questions were made to determine relationships of responses. Cross tabulations of demographic responses to responses on use or non-use of cost benefit analysis for training were made to determine relationships or responses. Conclusions resulting from analysis of responses from the population and cross tabulations were reported. Descriptive statistics used in the study were percentages, sum, mean, mode, chi-square, median, and range. Statistical references included Gay (1981); Jaccard (1983); and Isaac and Michael (1987).

### Summary

This chapter described the methods and procedures used in the study. The study was conducted in four phases: (1) research question development, (2) description of the population, (3) description of the instrument for data collection, and (4) description of procedures for analyzing the data.

Nine questions were compiled to cover the study. The questionnaire was designed to answer the research questions and provide information on use of cost benefit analysis on two types of task training, action task training and cognitive task training. The population surveyed was composed of the directors of training in the Fortune 200 industries. This population was used because they were rated as some of the most successful industries in the United States. These industries have large numbers of human resources, complex organizations, and highly educated, experienced training professionals who would most likely understand the questionnaire and furnish the needed information.

A suitable instrument for use in the study did not exist. An instrument was designed. Questions were developed from important material in the review of literature and contacts with human resource development professionals. The questionnaire was reviewed by advisory committee members and also by three outside experts on the subject. The questionnaire was revised based on these reviews.

The questionnaire was then tested for reliability of content and purpose on the human resource development directors of training or their equivalents at 15 Oklahoma industries. The results of the pilot test were evaluated and the questionnaire was again revised and printed.

Following these actions, the survey was mailed to the Fortune 200 population by cover letter. A first and second follow-up by mail resulted in the return of 36 percent of the questionnaires. A final telephone effort resulted in another two percent of the surveys being returned for a total of 38 percent.

Following this effort to obtain the greatest possible return, responses to the questionnaires were tallied and analyzed. The results of the study were shown in tables and reported in Chapter IV.

## CHAPTER IV

### PRESENTATION OF FINDINGS

#### Introduction

The nine basic research questions compiled for this study were used as divisions for this chapter to report the results of the study. Each division lists the research questions, the results of the study about the question, and the applicable table(s).

Of 200 questionnaires mailed to the directors of training in the Fortune 200 industries, 77 were returned or 38.5 percent of the n=200 population. Of the 77, four were returned as undeliverable and two were returned indicating a policy of not completing surveys at this time. The results of the study were based on the 71 usable respondents or 35.5 percent of the n=200 population who completed and returned the questionnaires.

The questionnaire was designed to gather information in three areas to determine contemporary practice on use of cost benefit analysis (CBA) for training (1) general use on any training, (2) use on action task training (ATT), and (3) use on cognitive task training (CTT). Respondents accordingly were to answer questions about their use of CBA in these areas as applicable to their training. When respondents indicated non-use of CBA in an area of training they were included under no response.

## Results

The results of the study are shown following the research questions.

### Research Question One

Research question one was, "Did the study respondents use any formal or informal CBA on any of their training?" The data show that less than half of the respondents use CBA either formally or informally. The results of responses are shown in Table I.

TABLE I  
USE OF ANY FORMAL OR INFORMAL COST BENEFIT ANALYSIS  
FOR TRAINING IN THE LAST TWO YEARS

	Response Frequency	% of Total	% of Respondents
a. Yes	33	46.5	46.5
b. No	38	53.5	53.5
Total	<u>N=71</u>	<u>100.0</u>	<u>100.0</u>

### Research Question Two

Research question two was "Did the study respondents use CBA for their ATT?" The data show that 38 percent of the total respondents did



use CBA for their ATT in the last two years. The small percentage who had not used CBA for their ATT indicated a "not a major concern" as the principle reason. The results are listed in Table II.

TABLE II  
USE OF COST BENEFIT ANALYSIS FOR  
ACTION TASK TRAINING

	Response Frequency	% of Total	% of Responses
a. Yes	27	38.03	84.40
b. No	5	7.04	15.60
No response	39	54.93	—
Total	N=71	100.00	100.00

REASONS GIVEN FOR ANSWER

b. "NO" ABOVE:

Lack of System	1	20.00
Not a Major Concern	4	80.00
	5	100.00

Research Question Three

Research question three was, "Did the study respondents use CBA for their CTT?" The data indicate that 41 percent of the total respondents had used CBA on their CTT in the last two years. The small

percentage who had not done CBA on their CTT indicated "not a major concern" as the main reason. Results of responses are shown in Table III.

TABLE III  
USE OF COST BENEFIT ANALYSIS FOR  
COGNITIVE TASK TRAINING

	Response Frequency	% of Total	% of Responses
a. Yes	29	40.85	90.60
b. No	3	4.23	9.40
No response	39	54.93	—
Total	<u>N=71</u>	<u>100.00</u>	<u>100.00</u>
REASONS GIVEN FOR ANSWER			
b. "NO" ABOVE:			
Lack of System	1		33.30
Not a Major Concern	2		66.70
	<u>3</u>		<u>100.00</u>

#### Research Question Four

Research question four was, "What was the relationship between ATT and CTT with regard to the use of CBA?" Cross analysis of responses on the use of CBA for ATT and CTT indicate that CBA was used for CTT

slightly more than ATT. This was explained by some directors' comments that ATT was not the corporate level responsibility but that of the field operation. Most respondents, however, answered for both ATT and CTT. Cross tabulation is shown in Table IV.

TABLE IV  
CROSS TABULATION ON USE OF COST BENEFIT ANALYSIS FOR  
ACTION TASK TRAINING AND COGNITIVE TASK TRAINING

	Frequency	% of Total	% of Responses
<hr/>			
Action Task			
YES	27	38.03	84.40
NO	5	7.04	15.60
No response	39	54.93	—
Total	<hr/> N=71	<hr/> 100.00	<hr/> 100.00
COGNITIVE TASK			
YES	29	40.85	90.60
NO	3	4.23	9.40
No response	39	54.93	—
	<hr/> N=71	<hr/> 100.00	<hr/> 100.00
<hr/>			

### Research Question Five

Research question five was, "What was the relationship between ATT and CTT with regard to important criteria for application of CBA?" Six criteria applicable to training planning were listed in the questionnaire. These criteria were listed with a Likert type rating scale ranging from very important to very unimportant. The respondents rated such criteria as to the perceived importance of the criteria in application of CBA to ATT and CTT. The results of the study are listed in Tables V to XVI. Cross analysis of the relationship of Tables V to XII on ATT and XIII to XVI on CTT are shown in Table XVII.

Action Task Training. The responses indicated the "policy on cost benefit analysis criteria" is neither important nor unimportant in planning CBA for ATT. See Table V.

TABLE V  
ACTION TASK POLICY ON COST BENEFIT ANALYSIS

RATING	Frequency	% of Total	% of Responses
1 Very Important	2	2.82	7.10
2 Important	7	9.86	25.00
3 Neither Important nor Unimportant	11	15.49	39.00
4 Unimportant	6	8.45	21.40
5 Very Unimportant	2	2.82	7.10
No response	43	60.56	—
Total	N=71	100.00	100.00

The respondents indicated that "training request criteria" were important in planning CBA for ATT. See Table VI.

TABLE VI  
ACTION TASK TRAINING REQUEST

RATING	Frequency	% of Total	% of Responses
1 Very Important	5	7.04	17.90
2 Important	14	19.72	50.00
3 Neither Important nor Unimportant	7	9.86	25.00
4 Unimportant	2	2.82	7.10
5 Very Unimportant	0	0.00	0.00
No response	43	60.56	—
Total	N=71	100.00	100.00

The responses indicated the "training needs analysis criteria" were very important in planning CBA for ATT. See Table VII.

The respondents indicated the "training and related costs criteria" were very important in planning CBA for ATT. See Table VIII.

The respondents rated "performance task criteria" as very important in planning CBA for ATT. See Table IX.

TABLE VII  
ACTION TASK TRAINING NEEDS ANALYSIS

RATING	Frequency	% of Total	% of Responses
1 Very Important	14	19.72	50.00
2 Important	9	12.68	32.10
3 Neither Important nor Unimportant	4	5.63	14.30
4 Unimportant	1	1.41	3.60
5 Very Unimportant	0	0.00	0.00
No response	43	60.56	—
Total	N=71	100.00	100.00

TABLE VIII  
ACTION TASK TRAINING AND RELATED COSTS

RATING	Frequency	% of Total	% of Responses
1 Very Important	12	16.90	42.90
2 Important	10	14.09	35.70
3 Neither Important nor Unimportant	4	5.63	14.30
4 Unimportant	1	1.41	3.60
5 Very Unimportant	1	1.41	3.60
No response	43	60.56	—
Total	N=71	100.00	100.00

TABLE IX  
ACTION TASK PERFORMANCE TASK

RATING	Frequency	% of Total	% of Responses
1 Very Important	10	14.09	35.70
2 Important	9	12.67	32.10
3 Neither Important nor Unimportant	5	7.04	17.90
4 Unimportant	4	5.63	14.30
5 Very Unimportant	0	0.00	0.00
No response	43	60.56	—
Total	N=71	100.00	100.00

The respondents rated the "performance standards criteria" as very important for planning CBA for ATT. See Table X.

The respondents rated the "policy on cost benefit analysis criteria" as neither important nor unimportant in planning CBA for CTT. See Table XI.

The respondents rated the "training request criteria" as important in planning CBA for CTT. See Table XII.

The respondents rated the "training needs analysis criteria" as very important in planning CBA for CTT. See Table XIII.

The respondents rated the "training and related costs criteria" as important in planning CBA for CTT. See Table XIV.

TABLE X  
ACTION TASK PERFORMANCE STANDARDS

RATING	Frequency	% of Total	% of Responses
1 Very Important	10	14.08	35.70
2 Important	7	9.86	25.00
3 Neither Important nor Unimportant	6	8.45	21.40
4 Unimportant	3	4.23	10.70
5 Very Unimportant	2	2.82	7.10
No response	43	60.56	—
Total	N=71	100.00	100.00

TABLE XI  
COGNITIVE TASK POLICY ON COST BENEFIT ANALYSIS

RATING	Frequency	% of Total	% of Responses
1 Very Important	3	4.23	10.30
2 Important	5	7.04	17.20
3 Neither Important nor Unimportant	12	16.90	41.40
4 Unimportant	7	9.86	24.10
5 Very Unimportant	2	2.82	6.90
No response	42	59.15	—
Total	N=71	100.00	100.00



TABLE XII  
COGNITIVE TASK TRAINING REQUEST

RATING	Frequency	% of Total	% of Responses
1 Very Important	4	5.63	13.80
2 Important	15	21.13	51.70
3 Neither Important nor Unimportant	8	11.27	27.60
4 Unimportant	2	2.82	6.90
5 Very Unimportant	0	0.00	0.00
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XIII  
COGNITIVE TASK TRAINING NEEDS ANALYSIS

RATING	Frequency	% of Total	% of Responses
1 Very Important	15	21.30	51.70
2 Important	8	11.27	27.60
3 Neither Important nor Unimportant	4	5.63	13.80
4 Unimportant	2	2.82	6.90
5 Very Unimportant	0	0.00	0.00
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XIV  
COGNITIVE TASK TRAINING AND RELATED COSTS

RATING	Frequency	% of Total	% of Responses
1 Very Important	9	12.68	31.00
2 Important	12	16.90	41.40
3 Neither Important nor Unimportant	6	8.45	20.70
4 Unimportant	1	1.41	3.40
5 Very Unimportant	1	1.41	3.40
No response	42	59.15	—
Total	N=71	100.00	100.00

The respondents rated the "performance tasks criteria as neither important nor unimportant in planning CBA for CTT. See Table XV.

Equal numbers of respondents rated the "performance standards criteria" as important or as "neither important nor unimportant." See Table XVI.

Analysis of relationship of responses to questions on importance of criteria in planning CBA for ATT and CTT shows a difference in the perceived importance of the criteria for ATT and CTT. See Table XVII.

#### Research Question Six

Research Question six was, "What was the relationship between ATT and CTT with regard to usefulness of CBA results?" Five questions on

TABLE XV  
COGNITIVE TASK PERFORMANCE TASKS

RATING	Frequency	% of Total	% of Responses
1 Very Important	7	9.86	24.10
2 Important	8	8.45	27.60
3 Neither Important nor Unimportant	10	14.09	34.50
4 Unimportant	3	4.23	10.30
5 Very Unimportant	1	1.41	3.40
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XVI  
COGNITIVE TASK PERFORMANCE STANDARDS

RATING	Frequency	% of Total	% of Responses
1 Very Important	5	7.04	17.20
2 Important	9	12.68	31.00
3 Neither Important nor Unimportant	9	12.68	31.00
4 Unimportant	4	5.63	13.80
5 Very Unimportant	2	2.82	6.90
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XVII  
CROSS ANALYSIS OF RESPONSES ON RELATIONSHIP OF CRITERIA  
BY PERCEIVED IMPORTANCE IN PLANNING  
CBA FOR ATT AND CTT

ACTION TASK TRAINING		
Importance Rating	Criteria	Mean Rating
Very Important	Training Needs Analysis	1.71
Very Important	Training and Related Costs	1.89
Very Important	Performance Tasks	2.11
Very Important	Performance Standards	2.29
Important	Training Request	2.21
Neither Important nor Unimportant	Policy on use of CBA	2.96
COGNITIVE TASK TRAINING		
Importance Rating	Criteria	Mean Response
Very Important	Training Needs Analysis	1.82
Very Important	Training and Related Costs	2.14
Very Important	Training Request	2.36
Neither Important nor Unimportant	Performance Tasks	2.50
Neither Important nor Unimportant	Performance Standards	2.71
Neither Important nor Unimportant	Policy on use of CBA	3.11

usefulness of CBA results were included in the study. Tables XVIII to XXII indicate responses for ATT and Tables XXIII to XXVII list responses for CTT. The usefulness of CBA results for each item was rated by the respondents by a Likert type scale ranging from "Strongly Agree" to "Strongly Disagree."

Action Task Training. The respondents indicated they strongly agree that CBA results for ATT are useful in compiling budget data. See Table XVIII.

TABLE XVIII  
ACTION TASK USEFULNESS IN COMPILING BUDGET DATA

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	12	16.90	42.90
2 Agree	9	12.68	32.10
3 Undecided	5	7.04	17.90
4 Disagree	1	1.41	3.60
5 Strongly Disagree	1	1.41	3.60
No response	43	60.56	—
Total	N=71	100.00	100.00

The respondents indicated that they strongly agree that the results of CBA for ATT is useful in proving the worth of training. See Table XIX.

TABLE XIX  
ACTION TASK USEFULNESS IN PROVING THE WORTH OF TRAINING

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	13	18.31	46.40
2 Agree	10	14.08	35.70
3 Undecided	2	2.82	7.10
4 Disagree	2	2.82	7.10
5 Strongly Disagree	1	1.41	3.60
No response	43	60.56	—
Total	N=71	100.00	100.00

The respondents indicated they agree that results of CBA for ATT is useful in obtaining training funds. See Table XX.

The respondents indicated that they agree the results of CBA for ATT is useful in program continuation decisions. See Table XXI.

The respondents agree and an equal number strongly agree that the results of CBA for ATT is useful in supporting organizational goals. See Table XXII.

TABLE XX  
ACTION TASK USEFULNESS IN OBTAINING TRAINING FUNDS

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	9	12.68	32.10
2 Agree	11	15.49	39.30
3 Undecided	5	7.04	17.90
4 Disagree	2	2.82	7.10
5 Strongly Disagree	1	1.41	3.60
No Response	43	60.56	—
Total	N=71	100.00	100.00

TABLE XXI  
ACTION TASK USEFULNESS IN PROGRAM CONTINUATION DECISIONS

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	11	15.49	39.30
2 Agree	13	18.31	46.40
3 Undecided	1	1.41	3.60
4 Disagree	3	4.23	10.70
5 Strongly Disagree	0	0.00	0.00
No response	43	60.56	—
Total	N=71	100.00	100.00

TABLE XXII  
ACTION TASK USEFULNESS IN SUPPORTING ORGANIZATIONAL GOALS

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	10	14.08	35.70
2 Agree	10	14.08	35.70
3 Undecided	4	5.63	14.30
4 Disagree	3	4.23	10.70
5 Strongly Disagree	1	1.41	3.60
No response	43	60.56	—
Total	N=71	100.00	100.00

Cognitive Task Training. The respondents indicated that they agree the results of CBA for CTT are useful in compiling budget data. See Table XXIII.

The respondents indicated that they agree that the results of CBA for CTT are useful in providing the worth of training. See Table XXIV.

The respondents agree that the results of CBA for CTT are useful in obtaining training funds. See Table XXV.

The respondents indicated that they agree that the results of CBA for CTT are useful in program continuation decisions. See Table XXVI.

The respondents indicated that they agree that the results of CBA for CTT are useful in supporting organizational goals. See Table XXVII.



TABLE XXIII  
COGNITIVE TASK USEFULNESS IN COMPILING BUDGET DATA

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	9	12.68	31.00
2 Agree	12	16.90	41.40
3 Undecided	5	7.04	17.20
4 Disagree	2	2.82	6.90
5 Strongly Disagree	1	1.41	3.40
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XXIV  
COGNITIVE TASK USEFULNESS IN PROVING THE WORTH OF TRAINING

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	8	11.27	27.60
2 Agree	12	16.90	41.40
3 Undecided	6	8.45	20.70
4 Disagree	2	2.82	6.90
5 Strongly Disagree	1	1.41	3.40
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XXV  
COGNITIVE TASK USEFULNESS IN OBTAINING TRAINING FUNDS

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	6	8.45	20.70
2 Agree	14	19.72	48.30
3 Undecided	6	8.45	20.70
4 Disagree	2	2.82	6.90
5 Strongly Disagree	1	1.41	3.40
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XXVI  
COGNITIVE TASK USEFULNESS IN PROGRAM CONTINUATION DECISIONS

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	9	12.68	31.00
2 Agree	15	21.13	51.70
3 Undecided	3	4.23	10.30
4 Disagree	2	2.82	6.90
5 Strongly Disagree	0	0.00	0.00
No response	42	59.15	—
Total	N=71	100.00	100.00

TABLE XXVII  
COGNITIVE TASK USEFULNESS IN SUPPORTING ORGANIZATIONAL GOALS

RATING	Frequency	% of Total	% of Responses
1 Strongly Agree	7	9.86	24.10
2 Agree	15	21.13	51.70
3 Undecided	3	4.23	10.30
4 Disagree	3	4.23	10.30
5 Strongly Disagree	1	1.41	3.40
No response	42	59.15	—
Total	N=71	100.00	100.00

#### Research Question Seven

Research question seven was, "What was the relationship of ATT and CTT with regard to the schedule for conducting CBA?" The majority of respondents to the study indicated there is no set period for conducting CBA. Usually the time for conducting the analysis is as agreed to in each training programs. Comments from the respondents indicated this is an area of increasing attention as use of CBA grows. The need to meet fiscal year requirements and organizational needs are some of the considerations for a schedule. See Table XXVIII for ATT and Table XXIX for CTT responses on schedules.

TABLE XXVIII  
ACTION TASK SCHEDULE FOR CONDUCTING COST BENEFIT ANALYSIS

VARIABLE	Frequency	% of Total	% of Responses
a. Within one year	6	8.45	21.40
b. W/I six months after completion of ea. session.	5	7.04	17.90
c. W/I six months after program completion.	7	9.86	25.00
d. No set period, usually as agreed in ea. training program.	10	14.08	35.70
No response	43	60.56	—
Total	N=71	100.00	100.00

TABLE XXIX  
COGNITIVE TASK SCHEDULE FOR CONDUCTING COST BENEFIT ANALYSIS

VARIABLE	Frequency	% of Total	% of Responses
a. Within one year	6	8.45	20.70
b. W/I six months after completion of ea. session.	3	4.23	10.30
c. W/I six months after program completion.	3	4.23	10.30
d. No set period, usually as agreed in ea. training program.	17	23.94	58.60
No response	42	59.15	—
Total	N=71	100.00	100.00

### Research Question Eight

Research question eight was, "What was the relationship of ATT and CTT with regard to the satisfaction with results of CBA?"

Action Task Training. The respondents rated the overall results of CBA for their ATT as "somewhat satisfied." See Table XXX.

TABLE XXX  
SATISFACTION WITH RESULTS OF COST BENEFIT ANALYSIS  
FOR ACTION TASK TRAINING

VARIABLE	Frequency	% of Total	% of Responses
1 Completely Satisfied	1	1.41	3.60
2 Somewhat Satisfied	20	28.17	71.40
3 Neither Satisfied nor Dissatisfied	6	8.45	21.40
4 Somewhat Dissatisfied	1	1.41	3.60
5 Completely Dissatisfied	0	0.00	0.00
No response	43	60.56	—
	<hr/> N=71	<hr/> 100.00	<hr/> 100.00

Cognitive Task Training. The respondents rated the overall results of CBA for their CTT as "Neither Satisfied nor Dissatisfied." See Table XXXI.

TABLE XXXI  
SATISFACTION WITH RESULTS OF COST BENEFIT ANALYSIS FOR  
COGNITIVE TASK TRAINING

VARIABLE	Frequency	% of Total	% of Responses
1 Completely Satisfied	2	2.82	6.70
2 Somewhat Satisfied	7	9.86	23.30
3 Neither Satisfied nor Dissatisfied	18	25.35	60.00
4 Somewhat Dissatisfied	3	4.23	10.00
5 Completely Dissatisfied	0	0.00	0.00
No response	41	57.74	—
	<hr/> N=71	<hr/> 100.00	<hr/> 100.00

#### Research Question Nine

Research question nine was, "What was the relationship of demographic questions to responses on use of non-use of CBA?" Demographic questions in the survey included the number of years the respondents had been director, the number of years experience the

director had as a training professional, the educational level attained, the number of employees for which the director had training responsibility, and the estimated training budget. Responses to these questions are tabulated in Tables XXXII to XXXVI. Analysis of relationship of the demographics to questions on use and non-use of CBA follows in Tables XXXVII to XLI.

Responses indicated that approximately 35 percent of the respondents had less than two years in the position. The respondents (n=71) had a total of 372 years in the position of director of training. See Table XXII.

The respondents had a total of 1,038 years of experience as training professionals. The range of experience was from one to 30 years. The mode was 15 years. The data from responses is shown in Table XXXIII.

The majority of respondents have Master's degrees or Doctoral degrees. See Table XXXIV.

The scope of training responsibility shows that most of the responding organizations have from 1,000 to 30,000 employees. See Table XXXV.

The responses about training budgets are listed in Table XXXVI.

TABLE XXXII  
NUMBER OF YEARS RESPONDENT HAD BEEN DIRECTOR OF  
TRAINING (OR EQUIVALENT) FOR THE COMPANY

Years Dir. Trng.	Frequency	% of Responses
1	17	23.90
2	9	12.70
3	7	9.90
4	4	5.60
5	5	7.00
6	6	8.50
7	3	4.20
8	4	5.60
9	4	5.60
10	5	7.00
11	1	1.40
12	3	4.20
16	1	1.40
17	1	1.40
20	1	1.40
372	N=71	100.00



TABLE XXXIII  
NUMBER OF YEARS OF EXPERIENCE AS A  
TRAINING PROFESSIONAL

Years Experience	Frequency	% of Responses
1	2	2.80
2	1	1.40
5	4	5.60
6	1	1.40
7	2	2.80
8	2	2.80
9	3	4.20
10	8	11.30
11	2	2.80
12	4	5.60
13	4	5.60
14	2	2.80
15	10	14.10
16	2	2.80
18	1	1.40
19	1	1.40
20	8	11.30
21	4	5.60
22	1	1.40
23	1	1.40
25	5	7.00
28	1	1.40
30	2	2.80
x Freq. 1038	N=71	100.00

TABLE XXXIV  
CHARACTERISTICS BY EDUCATION

EDUCATION	Frequency	% of Responses
Bachelor Degree	23	32.40
Masters Degree	39	54.90
Doctoral Degree	9	12.70
	<u>N=71</u>	<u>100.00</u>

TABLE XXXV  
SCOPE OF TRAINING RESPONSIBILITY  
(NUMBER OF EMPLOYEES)

SCOPE EMPLOYEES	Frequency	% of Total
a. 1-1,000	7	9.90
b. 1,001-10,000	22	31.00
c. 10,001-20,000	15	21.10
d. 20,001-30,000	13	18.30
e. 30,001-40,000	1	1.40
f. 40,001-50,000	3	4.20
g. 50,001-70,000	5	7.00
h. 70,001-90,000	2	2.80
i. 90,001-Over	3	4.20
	<u>N=71</u>	<u>100.00</u>

TABLE XXXVI  
CHARACTERISTICS BY TRAINING BUDGET

SCOPE BUDGET \$	Frequency	% of Total
a. 1-50,000	6	8.50
b. 50,001-100,000	4	5.60
c. 100,001-200,000	7	9.90
d. 200,001-400,000	14	19.70
e. 400,000-600,000	10	14.10
f. 600,001-800,000	5	7.00
g. 801,000-1 m	6	8.50
h. 1 m 1-10 m	13	18.30
i. 10 m 1-Over	6	8.50
	<u>N=71</u>	<u>100.00</u>

Cross analysis of relationships of demographics to responses of use and non-use of CBA were as follows.

Cross analysis of the number of years on the position of director to responses on use and non-use of CBA is indicated in Table XXXVII.

Cross tabulation of directors years of experience to responses on use and non-use of CBA are shown in Table XXXVIII.

TABLE XXXVII

CROSS TABULATION OF DIRECTORS YEARS IN POSITION TO  
USE OR NON-USE OF COST BENEFIT ANALYSIS

Resp.	Done CBA?	%	Total Yrs on the job	% of Total Yrs.	Avg. yrs on job
33	Yes	46.	187	50.27	5.67
38	No	54.	185	49.73	4.87
n=71		100.	372	100.00	

TABLE XXXVIII

CROSS TABULATION OF DIRECTORS YEARS OF EXPERIENCE  
TO USE OR NON-USE OF COST BENEFIT ANALYSIS

Resp.	Done CBA	%	Total Yrs of Experience	% of Total Yrs.	Avg. yrs Experience
33	Yes	46.	492	47.40	14.91
38	No	54.	546	52.60	14.37
n=71		100.	1038	100.00	

Cross tabulations of educational level attainment to the responses on use and non-use of CBA indicated no major difference for the Bachelor and Master's degree. Use of CBA by those directors having Doctor's degrees exceeded those with lesser degrees. See Table XXXIX.

TABLE XXXIX  
CROSS TABULATION BY EDUCATION OF DIRECTORS TO  
USE AND NON-USE OF COST BENEFIT ANALYSIS

Resp.	Done CBA	%	Bachelor	%	Masters	%	Masters	%
33	Yes	46.	11	47.83	18	47.40	7	77.78
38	No	54.	12	52.17	21	53.82	2	22.22
n=71		100.		100.00		100.00		100.00

Cross tabulation of responses on number of employees to responses on use and non-use of CBA revealed there was no significant trend ( $\chi^2 = 6.28$  df = 3,  $p = .099$ ). In the chi-square analysis Table XL was collapsed for columns a-b, c-d, e-f, and g-i. For those organizations having over 50,000 employees the responses indicated they had done CBA more than organizations with a smaller number of employees. See Table XL.

TABLE XL

CROSS TABULATION BY NUMBER OF EMPLOYEES TO USE AND NON-USE  
OF COST BENEFIT ANALYSIS

Resp	Done CBA	%	a 1- 1,000	b 1,001- 10,000	c 10,001- 20,000	d 20,001- 30,000	e 30,001- 40,000	f 40,001- 50,000	g 50,001- 70,000	h 70,001- 90,000	i 90,001- over
33	Yes	46.	1	9	7	7	1	1	3	2	3
38	No	54.	6	13	8	6	0	2	2	0	0
<u>n=71</u>		<u>100.</u>									

Cross tabulation of responses on training budgets to responses on use and non-use of CBA indicated a significant trend ( $X^2 = 19.11$ ,  $df=3$ ,  $p=.001$ ). In the chi-square analysis Table XLI was collapsed for columns a-b, c-d, e-g, and h-i. Organizations with training budgets over one million dollars had done more CBA than organizations with smaller training budgets. See Table XLI.

### Summary

The results of the study were tabulated and reported in this chapter. Nine divisions, matching the basic research questions, were utilized to report the results. The survey consisted of three parts with questions designed to answer the basic research questions.

The study addressed the question of use of formal and informal CBA on any training by the respondents. The questionnaire then specifically addressed questions on the use of CBA on two types of training, ATT and CTT. The part three questions were demographics about the respondents and their organizations.

A total of 71 usable responses or 35.5 percent of the  $n=200$  population were used to report the results of the study. The responses were tallied and the data were listed in frequency distribution tables. The data were reported based on analysis of the tables. Cross analysis of ATT and CTT responses indicated no marked lack of association. Analysis of demographics on training budgets to use and non-use of CBA indicated a significant trend for those with higher budgets to do more CBA than those with lower budgets. Comments made by the respondents were reported in this chapter or summarized in Appendix H. Conclusions, findings, and recommendations were reported in Chapter V.

TABLE XLI

CROSS TABULATION OF TRAINING BUDGET TO USE AND NON-USE  
OF COST BENEFIT ANALYSIS

Resp	Done CBA	%	a \$ 1- 50,000	b 50,001- 100,000	c 100,001- 200,000	d 200,001- 400,000	e 500,001- 600,000	f 600,001- 800,000	g 800,001- 1M	h 1M1- 10M	i 10M1- over
33	Yes	46.	0	1	1	5	5	3	3	10	6
38	No	54.	6	3	6	9	5	2	3	3	0
<u>n=71</u>		<u>100.</u>									



## CHAPTER V

### SUMMARY, CONCLUSIONS, FINDINGS, AND RECOMMENDATIONS

#### Summary

The scope of this descriptive study was to gather needed information about the present practice of use of cost benefit analysis (CBA) for action task training (ATT) and cognitive task training (CTT) from a population of directors of training. Literature highlighted the need for industrial and other training activities to adopt systems of CBA to prove the worth of their training programs.

The declining economic conditions in industry, product competition, lack of quality, loss of production, and increased need for training to meet the needs of new and revised technological advances were but a few of the causes of management attention on training functions for support.

While the human resource field reacted with many articles on the need for CBA techniques to be developed and adopted, there was little or no collective information on which to base knowledge of practices being used to determine the worth of training and the percentage of application of CBA to ATT and CTT. This information was considered vital not only to gather data on actual practice but to provide for future decisions in areas of CBA application to training. The

information could help other industrial directors of training, human resource development professionals and educators to better understand current practice.

This study was designed to address the problem of the lack of adequate information being available on CBA use from a population of directors of training.

The study surveyed directors of training in the Fortune 200 industries about the use of CBA on two types of training, ATT and CTT. Action task training was related to technical training and cognitive task training to management training. The questionnaire was also used to gather information on whether or not the population had used CBA techniques formally or informally on any of their training in the last two years. Those who had done CBA on their training were asked what was the application of CBA to ATT and CTT. With these determinations made, those who had done CBA on ATT and/or CTT were asked to answer the questions about what they considered to be important criteria for application of CBA, usefulness of CBA results to training director functions; schedules for conducting the CBA on their training; and their overall satisfaction with results of conducting CBA on their training.

Demographics about the population were also obtained, tabulated and cross tabulated.

In descriptive studies one generally is asking questions that have not been asked before, and usually an instrument has to be developed for the specific study, as was the case in this study. The instrument questions were developed from important data in the literature review. They were then structured for the population using appropriate

definitions and language to communicate what information was needed. The instrument was reviewed by subject matter experts, refined, and then pilot-tested for reliability on a group of Oklahoma industrial directors of training fitting most characteristics of the target population. This took much time, analysis and revision. The instrument was finalized and sent to the target population.

Because of the summer vacation period, level of the target population, nature of the study, and mail time throughout the United States, getting the subjects to return the questionnaires required the original mailing, a first and second follow-up by mail, and telephone calls.

The results of the study are tabulated in Chapter IV by the nine research questions and the survey questions designed to gather the data. This information provided a description of current practice and a basis for future study of the subject area.

Conclusions and recommendations based on the results of the study are as follows.

### Findings and Conclusions

#### Finding

The responses of the population studied indicated that 54 percent of the population did not use any formal or informal CBA on any of their training in the last two years.

#### Conclusion

The use of CBA for training by industrial training organizations is increasing slowly but still leaves much to be desired.

### Finding

Forty-six percent of the responding population indicated they had used formal or informal cost benefit analysis on their training in the last two years. Those who had applied CBA to ATT rated the satisfaction of overall results as "Somewhat Satisfied." Respondents who indicated they had applied CBA to CTT they rated the satisfaction with overall results as "Neither Satisfied nor Dissatisfied."

### Finding

The responses from the population studied rated the training needs analysis, training and related costs, performance tasks, and performance standards, as "very important" to planning use of CBA for ATT. The training request was rated as "important."

### Conclusion

Important criteria for analysis of application of CBA to ATT includes front-end planning documentation and processes.

### Finding

In the front-end planning documentation and processes for CTT, the responses from the population studied rated the training needs analysis as "very important" to planning use of CBA. The training request was rated "important." Performance tasks and performance standards were rated as "neither important nor unimportant," perhaps because they usually do not exist for management training.

### Conclusion

Important criteria for analysis of application of CBA to CTT place major emphasis on justifying the need for the training.

### Finding

On ATT and CTT the majority of the respondents indicated that they "strongly agreed" or "agreed" that CBA is useful in compiling budget data, proving the worth of training, obtaining training funds, program continuation decisions, and supporting organizational goals.

### Conclusion

Cost benefit analysis results for training can be useful and beneficial for several human resource development functions and duties.

### Finding

The majority of responses to the survey questions on schedule for conducting the CBA indicated it is usually as agreed to in each training program. (In other words, there is no set schedule.) Some respondents indicated that the set schedule for conducting the analysis was within one year and others within six months after completion of each training session or program.

### Conclusion

When the use of CBA has been decided upon for a training program, a determination is made as to when it will be conducted.

Comments indicated that this is an area of attention because of the

need for the information from a fiscal year point of view. As use of CBA for training increases, this area may become more formalized.

#### Finding

There appears to be no marked lack of association between types of training on use of CBA for training.

#### Conclusion

The use of CBA for training as a formal process requires a definite knowledge of training and related costs to be applied to each element of the training to provide a rational model. Either one knows the information or one cannot use CBA in its formal sense. With the problems of intangible costs, it may be that a sort of informal use of CBA techniques may become acceptable to use the perceived benefits for justification. However, this is not a real substitute, but a "best you can do at this time" approach.

#### Conclusion

The study results indicated there was no marked lack of association between answers for ATT and CTT.

#### Finding

This study revealed the population to be highly educated with the majority having Master's and Doctoral degrees. Many of those who have Bachelor's degrees indicated they had additional graduate level hours. Each had an average number of about 15 years of experience. There appeared to be no major difference indicated between

these factors and the use or non-use of CBA by Bachelor's and Master's holders. For those with Doctor's degrees, however, CBA was used more than the others, and they primarily worked in plants having the greater numbers of employees and training budgets over one million dollars.

### Conclusion

All of the respondent directors of training to this study have college degrees and many years of experience as training professionals.

### Finding

Respondents with large training budgets used CBA more than those respondents with smaller training budgets.

### Conclusion

Analysis of responses indicated this to be a significant trend.

### Recommendations

The following are recommendations made as a result of this research.

A comprehensive front-end analysis of training should be conducted prior to the application of cost benefit analysis (CBA) to action task training (ATT) or cognitive task training (CTT). Front-end training documentation and processes for analysis and approval of training should be reviewed by the human resource development department to assure that the information needed for CBA application is available and included in the review. This area should include such material as the

training needs analysis, the training and related cost data, the training request, the performance tasks and the performance standards for the training.

Additional research should be conducted on other training population administrators to gather information on their use of CBA for their Action Task Training and Cognitive Task Training. This could serve to improve knowledge about practice in the subject area.

Further research should be supported and conducted on other aspects and variables of human resource development needs in the area of CBA for training. Research is an answer to what is happening and what is needed to move the profession forward in this complicated area of practice.

Consideration might be given to the establishment of a graduate level course or seminar type of training on CBA techniques for training. The course should be for directors of training and other training professionals.

Directors of training should consider establishment of basic policy statements for evaluation of training on a CBA basis.

In view of the slow but increasing formal use of CBA for training, schedules for conducting the analysis should be reviewed by the training department with consideration to fiscal year and other organizational needs for the CBA data.



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## APPENDIXES

APPENDIX A

COVER LETTER AND FOLLOW-UP LETTERS





*Oklahoma State University*

CENTER FOR HUMAN RESOURCE DEVELOPMENT  
COLLEGE OF EDUCATION

STILLWATER, OKLAHOMA 74078-0403  
CLASSROOM BUILDING 403

June 26, 1989

Dear Training Director,

This study concerns the use of cost benefit analysis for training. We especially want your response because of your expertise and actual experience in directing industrial training practices.

We are attempting to determine the impact of cost benefit analysis on the two major types of task training: Action Task, which is training to perform physical or skill centered activity, generally as in Technical Training and Cognitive Task, which is training to perform mentally, generally as in Management Training. The attached questionnaire has been designed and tested to obtain the necessary information while requiring a minimum of your time.

It will be appreciated if you will complete the questionnaire prior to July 14, 1989 and return it in the enclosed stamped envelope.

We would be pleased to send you a summary of the report. Enter your name and address and check the box. The respondents name and address will be used to correspond with you, otherwise it will be held in confidence. The entering of your name and address is optional. Thanks for cooperating and sharing your expertise.

Sincerely yours,

Rudolph A. D'Andrea,  
Doctoral Candidate  
Oklahoma State University  
c/o 712 Procter Place  
Midwest City, Ok. 73110  
1-405-732-1168

Faculty Advisor,

William R. Venable, Director  
Oklahoma State University  
Center for Human Resource  
Development 1-405-744-6275

2 Encls: Questionnaire &  
stamped return envelope





Oklahoma State University

SCHOOL OF OCCUPATIONAL AND ADULT EDUCATION  
COLLEGE OF EDUCATION

STILLWATER, OKLAHOMA 74078-0406  
CLASSROOM BUILDING 406  
(405) 744-6275

July 15, 1989

Dear Training Director and Colleague,

We have enclosed a follow-up copy of our questionnaire we sent to you in June. With the vacation period it may have become delayed. We especially want your input as a professional with expertise and experience in training administration. Won't you please help us by taking a few minutes of your time to complete the questionnaire and return it prior to August 4, 1989 in the envelope enclosed?

The study about the use of cost benefit analysis for training is needed and important. The two page questionnaire can be completed in less than nine minutes. We really need your input. By cooperating you will assist in completing the research study for the center and my doctoral dissertation. We will be most appreciative of your prompt support. Thanks for cooperating.

Sincerely yours,

*Rudy B. Andrea*  
Rudy B. Andrea, Doctoral  
Candidate  
Oklahoma State University  
c/o 712 Procter Place  
Midwest City, Ok. 73110  
1-405-732-1168

Faculty Advisor,

*William R. Venable*  
Dr. William R. Venable, Director  
Oklahoma State University  
Center for Human Resource  
Development 1-405-744-6275

2 Encls: Questionnaire &  
stamped return envelope



Celebrating the Past... Preparing for the Future



Oklahoma State University

SCHOOL OF OCCUPATIONAL AND ADULT EDUCATION  
COLLEGE OF EDUCATION

STILLWATER, OKLAHOMA 74078-0406  
CLASSROOM BUILDING 406  
(405) 744-2275

August 25, 1989

Dear Training Director and Colleague,

We have enclosed a follow-up copy of our questionnaire we sent to you in June. With the vacation period it may have become delayed. We especially want your input as a professional with expertise and experience in training administration. Won't you please help us by taking a few minutes of your time to complete the questionnaire and return it prior to September 7, 1989 in the envelope enclosed?

The study about the use of cost benefit analysis for training is needed and important. The two page questionnaire can be completed in less than nine minutes. We will be most appreciative of your prompt support. Thanks for cooperating.

Sincerely yours,

*Rudy D. Andrea*  
Rudy D. Andrea, Doctoral  
Candidate  
Oklahoma State University  
c/o 712 Procter Place  
Midwest City, Ok. 73110  
1-405-732-1168

Faculty Advisor,

*William R. Venable*  
Dr. William R. Venable, Director  
Oklahoma State University  
Center for Human Resource  
Development 1-405-744-6275

2 Encls: Questionnaire &  
stamped return envelope



Celebrating the Past... Preparing for the Future

**APPENDIX B**

**QUESTIONNAIRE INSTRUCTIONS**

CENTER FOR HUMAN RESOURCE DEVELOPMENT  
OKLAHOMA STATE UNIVERSITY

**Impact of Cost Benefit Analysis on Action Task  
and Cognitive Task Training**

Researcher: Rudolph A. D'Andrea  
Advisor: Dr. William R. Venable

**INSTRUCTIONS**

**General**

1. This study is concerned with the use of cost benefit analysis by your training organization, in the past two years. The sharing of your expertise on the actual use of cost benefit analysis for training will help provide a better understanding of contemporary practice and needs for the future.

**2. DEFINITION OF TERMS**

**ACTION TASK TRAINING** - Training to perform psychomotor, manual, physical or skill centered activity. Action Tasks have steps which are specific. Each step is observable, measurable, and is performed in a relatively short period of time. This task has a beginning and end, and is independent of other actions. An example would be to build a bookcase. Technical training is generally action task training.

**COGNITIVE TASK TRAINING** - Training to perform mentally. Cognitive behaviors such as evaluating, deciding, or discriminating are mental processes which are not observable, and do not follow a precise order that is easily definable or measurable. Management training is generally cognitive task training.

**COST BENEFIT ANALYSIS** - A systematic approach of comparing company costs of a program to the results of the program. The following are examples relating to training:

- (1) The process of comparing expected expenses to the potential advantages of implementing a new training program in the organization.
- (2) The process of comparing training program expenses to the income or the savings to the company as a result of training that resolved problems in quality, production, sales, and employee behavior, confronted by the organization.

**DIRECTOR OF TRAINING** - The administrator of human resource development.

**TASK** - A meaningful unit of work activity generally performed on the job by one worker within a limited period of time. This task is logical and necessary to reach a single objective or output. A task is a series of actions or behaviors which accomplishes a goal. Tasks are divided into two major types:

1. Action Tasks
2. Cognitive Tasks

**3. COMPLETING THE QUESTIONNAIRE**

After reviewing the cover letter and instructions, please complete the questionnaire using the guidance in each question. Most questions require only a check mark and all questions can be answered in 9 minutes or less. Any comments or attachments you may offer to us to provide a better understanding of your system would be welcomed.

**4. RESPONDENT'S ADDRESS BLOCK  
- OPTIONAL -**

Enter address information. To request a summary of the study, (check the box).

Name: \_\_\_\_\_

Title: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ State: \_\_\_\_\_ Zip Code: \_\_\_\_\_

Telephone Number: area code (\_\_\_\_) \_\_\_\_\_

☐ I would like to receive a summary of your study. Please send it to the above address.

**5. RETURN OF THE COMPLETED  
QUESTIONNAIRE**

Please use the enclosed addressed, stamped envelope to return the completed questionnaire to:

Rudolph A. D'Andrea  
712 Procter Place  
Midwest City, Oklahoma 73110

\_\_\_\_\_  
**THANKS FOR SHARING YOUR EXPERTISE**

**APPENDIX C**

**QUESTIONNAIRE**

## QUESTIONNAIRE

### PART I - ABOUT THE USE OF COST BENEFIT ANALYSIS FOR TRAINING

1. Has your organization done ANY formal or informal cost benefit analysis for your training in the last two years?  
(Check one)

☐ a. YES ☐ b. "NO" \*If no, go to PART III. Otherwise complete PARTS I, II, III.

2. Has your organization done cost benefit analysis for the following types of training in the last two years?

#### ACTION TASK TRAINING

(Check one)

☐ a. YES ☐ b. "NO" \*If no, please comment or indicate reason(s) below. (Check as appropriate)

☐ 1. Lack of system?

☐ Comment: \_\_\_\_\_

☐ 2. No direction to do so?

☐ 3. Too costly?

☐ 4. Not a major concern?

#### COGNITIVE TASK TRAINING

(Check one)

☐ a. YES ☐ b. "NO" \*If no, please comment or indicate reason(s) below. (Check as appropriate)

☐ 1. Lack of system?

☐ Comment: \_\_\_\_\_

☐ 2. No direction to do so?

☐ 3. Too costly?

☐ 4. Not a major concern?

### PART II - ABOUT THE APPLICATION OF COST BENEFIT ANALYSIS FOR TRAINING

1. Please use the scale of 1 to 5 to identify the level of importance of criteria listed below for the application of cost benefit analysis to the types of training listed.

1 - Very Important  
2 - Important  
3 - Neither Important or Unimportant  
4 - Unimportant  
5 - Very Unimportant

TYPE OF TRAINING	1					2				
	ACTION TASK					COGNITIVE TASK				
	1	2	3	4	5	1	2	3	4	5
a. POLICY on use of cost benefit analysis										
b. TRAINING REQUEST										
c. TRAINING NEEDS ANALYSIS										
d. TRAINING AND RELATED COSTS										
e. PERFORMANCE TASKS										
f. PERFORMANCE STANDARDS										

COMMENT: \_\_\_\_\_

2. Indicate how useful cost benefit analysis is for action task training and for cognitive task training according to the following scale.

FOR TYPES OF TRAINING Cost benefit analysis is...	1 - Strongly Agree 2 - Agree 3 - Undecided 4 - Disagree 5 - Strongly Disagree									
	1 ACTION TASK					2 COGNITIVE TASK				
	1	2	3	4	5	1	2	3	4	5
a. USEFUL IN COMPIING BUDGET DATA										
b. USEFUL IN PROVING THE WORTH OF TRAINING										
c. USEFUL IN OBTAINING TRAINING FUNDS										
d. USEFUL IN PROGRAM CONTINUATION DECISIONS										
e. USEFUL IN SUPPORTING ORGANIZATIONAL GOALS										

Comment:

3. When cost benefit analysis is applied to training, what is the schedule for conducting the analysis? Please check the appropriate frequency or comment for the types of training listed below.

TYPES OF TRAINING	1 ACTION TASK					2 COGNITIVE TASK				
a. WITHIN ONE YEAR										
b. WITHIN SIX (6) MONTHS AFTER EACH SESSION										
c. WITHIN SIX (6) MONTHS AFTER PROGRAM COMPLETED										
d. NO SET PERIOD, USUALLY AS AGREED TO IN EACH TRAINING PROGRAM										

Comment:

4. Overall, how satisfied was your organization with the results of cost benefit analysis conducted on your training in the last two years?

CHECK ONE FOR EACH TYPE OF TRAINING	1 - Completely Satisfied 2 - Somewhat Satisfied 3 - Neither Satisfied nor Dissatisfied 4 - Somewhat Dissatisfied 5 - Completely Dissatisfied				
	1	2	3	4	5
a. ACTION TASK TRAINING					
b. COGNITIVE TASK TRAINING					

Comment:

### PART III - ABOUT YOU AND THE SCOPE OF YOUR ORGANIZATION'S PROGRAM

1. How many years, to the nearest year, have you been director of training (or equivalent) for this company?	YEARS							
2. How many years of experience, to the nearest year, do you have as a training professional?	YEARS							
3. What is the highest education you have attained? High School, Associate, Bachelor, Master, or Doctoral Degree:	EDUCATION							
4. The scope of your overall training responsibility covers how many employees of this company? (Check one block)								
a.	b.	c.	d.	e.	f.	g.	h.	i.
1 - 1000 employees	1001 - 10 000	10,001 - 20 000	20,001 - 30 000	30,001 - 40 000	40,001 - 50 000	50,001 - 70 000	70,001 - 90 000	over 90 001
5. What was your total estimated training budget for 1988? Check one block.								
a.	b.	c.	d.	e.	f.	g.	h.	i.
1 - 50,000 dollars	50,001 - 100 000	100,001 - 200 000	200,001 - 400 000	400,001 - 600 000	600,001 - 800 000	800,001 - 1 ml	1 ml - 10 ml	over \$10 ml



## APPENDIX D

### RESEARCH QUESTIONS CHECKLIST

## APPENDIX "D"

## RESEARCH QUESTION NUMBER TO QUESTIONNAIRE QUESTION NUMBER

Research Question Number	Short title	Was answered by Questionnaire Part / Question Number	
1	Use of CBA in general for training?	I	1.a. , 1.b.
2	Use of CBA for ATT?	I	2.a., 2.b., 2.b.(1),(2),(3),(4)
3	Use of CBA for CTT?	I	2.c., 2.d., 2.d.(1),(2),(3),(4)
4	Relationship of CBA Use on ATT & CTT?	I	2.a., 2.b., 2.b.(1),(2),(3),(4) 2.c., 2.d., 2.d.(1),(2),(3),(4)
5	Relationship of Important Criteria for CBA Application to ATT & CTT?	II	1.a.(1),1.b.(1),1.c.(1),1.d.(1), 1.e.(1),1.f.(1),1.g.(1) 1.a.(2),1.b.(2),1.c.(2),1.d.(2) 1.e.(2),1.f.(2),1.g.(2)
6	Relationship of CBA Usefulness of Results ATT & CTT?	II	2.a.(1),2.b.(1),2.c.(1),2.d.(1) 2.a.(2),2.b.(2),2.c.(2),2.d.(2)
7	Relationship of Schedule for Conducting CBA on ATT & CTT?	II	3.a.(1),3.b.(1),3.c.(1),3.d.(1) 3.a.(2),3.b.(2),3.c.(2),3.d.(2)
8	Relationship of Satisfaction with Results of CBA Conducted on ATT & CTT?	II	4.a. , 4.b.
9	Description of Demographics	III	1, 2, 3, 4, 5

## APPENDIX "D"

## QUESTIONNAIRE AND RESEARCH QUESTION CHECK LIST

RQ 1. Did the population USE any formal or informal Cost Benefit Analysis (CBA) on ANY of their training in the last two years?

QQ Part I	1.a. Yes.....	Part I 1.b. No.....
	total	total
( Percent)	Yes.....	No.....
	% of pop	% of pop

.....

RQ 2. For their Action Task Training (ATT), did the population use CBA in the last two years?

QQ Part I	2.a. Yes.....	(Percent)	Yes.....
	total		% of pop
	2.b. No .....	( Percent)	No .....
	total		% of pop
(why no)	2.b. (1) Lack of System		.....
	(2) No direction to do so		.....
	(3) Too Costly		.....
	(4) Not a Major Concern		.....
			totals % of pop

Analysis of Comments:

.....

RQ 3 Did the population USE CBA for their Cognitive Task Training in the last two years?

QQ Part I	2.c. Yes .....	(Percent)	Yes.....
	total		% of pop
	2.d. No .....	(Percent)	No.....
	total		% of pop
(why no)	2.d. (1) Lack of System		.....
	(2) No direction to do so		.....
	(3) Too Costly		.....
	(4) Not a Major Concern		.....
			totals % of pop

Analysis of Comments:

.....

RQ 4 What was the relationship between ATT and CTT with regard to USE of CBA in the last two years by the population?

(Compare QQ)	2.a., 2.b. and 2.b.	(1), (2), (3), (4)
(report	to 2.c., 2.d. and 2.d.	(1), (2), (3), (4)
relationship)		

RQ 5 As rated by the population, what was the relationship between ATT and CTT with regard to important criteria for CBA application?

	Rating-	(1) ACTION TT					(2) COGNITIVE TT				
		1	2	3	4	5	1	2	3	4	5
QQ Part II 1.a. Policy.....											
b. Training Request.....											
c. Needs Analysis.....											
d. Training Costs.....											
e. Performance Task.....											
f. Performance Standards .....											
g. CBA Model.....											

(List rating totals under ATT and CTT)

( Compare ) 1.a.(1) thru 1.g.(1) to 1.a.(2) thru 1.g.(2).  
report  
relationship)

Analysis of Comments:

RQ 6 For ATT and CTT, what was the relationship regard to Usefulness of CBA results, as rated by the population?

	Rating-	(1) ACTION TT					(2) COGNITIVE TT				
		1	2	3	4	5	1	2	3	4	5
QQ Part II											
2. useful in:											
a. compiling budget data .....											
b. proving worth of training .....											
c. obtaining training funds .....											
d. program continuation dec .....											
e. supporting orgn. goals .....											

(List rating totals)

( Compare ) 2.a.(1) thru 2.e.(1) to 2.a.(2) thru 2.e.(2).

( report relationship)

Analysis of Comments:

RQ 7 "With regard to Schedule for Conducting CBA, what was the relationship of ATT and CTT responses?"

(1) (2)  
ACTION COGNITIVE

QQ Part II 3. a. Within one year .....  
b. Within six (6) months .....  
after each session .....  
c. Within six (6) months .....  
after program compl. ....  
d. No set time usually as .....  
agreed in each program .....

( List totals)

( Compare) 3.a.(1) thru 3.d.(1) to 3.a.(2) thru 3.d.(2).

(report relationship)

Analysis of Comments:

-----  
RQ 8 What was the relationship of ATT & CTT with regard to the population's satisfaction of results of CBA conducted?

rating- 1 2 3 4 5  
QQ Part II 4. a. Action Task Training .....  
b. Cognitive Task Training .....

( List totals)

( Compare) 4.a. to 4.b.

( report relationship)

-----  
RQ 9 Describe the demographics studied about the population?

QQ Part III 1. Been Director of Training Years.....total

QQ Part III 2. Years experience. Years.....total

QQ Part III 3 Highest Education Attained H A B M D

-----  
Totals

(Percent) % of pop by H A B M D

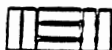
QQ Part III 4. Number of employees resp. for.  
totals. for a. b. c. d. e. f. g. h. i.  
(chart)

QQ Part III 5. Training Budget 1988  
totals for a. b. c. d. e. f. g. h. i.  
(chart)

APPENDIX E

PILOT TEST COVER LETTER

PILOT TEST DRAFT



Oklahoma State University

SCHOOL OF OCCUPATIONAL AND ADULT EDUCATION

STILLWATER, OKLAHOMA 74078  
CLASSROOM BUILDING 406  
(405) 624-6275

Dear Training Director,

We are pilot-testing this study which is concerned with the use of cost benefit analysis for training. We are particularly desirous of obtaining your responses because of your expertise and actual experience in directing industrial training practices.

The study is attempting to determine the impact of cost benefit analysis on the two major types of task training: Action Task, which is training to perform motor, manual, physical or skilled centered activity, generally as in Technical Training and Cognitive Task, which is training to perform mentally, generally as in Management Training. The attached questionnaire has been designed to obtain the necessary information while requiring a minimum of time.

Please read the instructions and complete the questionnaire for your activity. Then, on the back of the form please give us your comments: (1) did you understand the questions? (2) Do you think other industrial training directors would understand the questions? (3) Any recommendations for improvement in content, format or structure?

Your responses are important and will help provide educators and other professionals in the human resource development field with a better understanding of contemporary practice and needs in the future.

It will be appreciated if you will complete the questionnaire prior to May 28, 1989 and return it in the addressed, stamped, envelope enclosed. Other phases of the research cannot be carried out until we complete the analysis of the pilot-test data. We would welcome any comments you may have and any procedures you may attach that will help provide a better understanding your system. We would be pleased to send you a summary of the report, check the box next to your address. The name and address of the respondent will be used to correspond with you and otherwise will be held in confidence. Thanks for cooperating and sharing your expertise.

Sincerely yours,

*Paul A. D. Andrea*  
Paul A. D. Andrea  
Oklahoma State University  
712 Procter Place  
Midwest City, Ok. 73110  
1-405-732-1188

Faculty Advisor,

*William R. Venable*  
William R. Venable, Director  
Oklahoma State University  
Center for Human Resource  
Development 1-405-744-6278

2 Encls: Questionnaire &  
stamped return envelope

CENTENNIAL  
DECADE  
1980-1990

APPENDIX F

PILOT TEST INSTRUCTIONS AND  
QUESTIONNAIRE DRAFT



## PILOT TEST DRAFT

*Instructions*

## 1. GENERAL

This study is concerned with the use of cost benefit analysis by your training organization, in the last two years.

The sharing of your experience on the actual use of cost benefit analysis for training will help provide a better understanding of contemporary practice and needs in the future.

## 2. DEFINITION OF TERMS

**ACTION TASK TRAINING.** Training to perform psychomotor, manual, physical or skill centered activity. Action Tasks have steps which are specific. Each step is observable, measurable and is performed in a relatively short period of time. The task has a beginning and end and is independent of other actions. An example of action task would be to build a bookcase. Technical Training is generally action task training.

**COGNITIVE TASK TRAINING.** Training to perform mentally. Cognitive behaviors such as evaluating, deciding or discriminating are mental processes which are not observable, and do not follow a precise order that is easily definable or measurable. Management Training is generally cognitive task training.

**COST BENEFIT ANALYSIS**

A "Systematic Approach" of comparing company costs to results. The following examples relate to training:

- (1) The process of comparing expected expenses to the potential advantages of implementing a new training program in the organization.
- (2) The process of comparing training program expenses to the income or savings to the company as a result of training that resolved problems in quality, production, sales, behavior, etc. confronted by the organization.

**DIRECTOR OF TRAINING** The administrator of Human Resource Development.

**TASK** A meaningful unit of work activity generally performed on the job by one worker within a limited period of time. This task is logical and necessary to achieving a single objective or output. A series of actions or behaviors which accomplishes a goal. Tasks are divided into two major types: Action Tasks and Cognitive Tasks.

## 3. COMPLETING THE QUESTIONNAIRE

After reviewing the cover letter and instructions, please relate your Technical Training to Action Task Training and your Management Training to Cognitive Task Training and complete the questionnaire using the guidance in each question. Most questions only require a check mark and can be completed in a few minutes. Any comments you may have or attachments you may have to provide a better understanding of your system would be welcomed.

## 4. RESPONDENTS ADDRESS BLOCK

Enter address information. To request a summary of the study, check the box.

## 5. RETURN OF COMPLETED QUESTIONNAIRE

Please use the enclosed, stamped envelope to return the completed questionnaire to:

Rudolph A. D'Andrea  
Oklahoma State University  
712 Procter Place  
Midwest City, Oklahoma 73110

PILOT TEST

## QUESTIONNAIRE

DRAFT

## PART I ABOUT THE USE OF COST BENEFIT ANALYSIS FOR TRAINING

1. Has your organization done ANY cost benefit analysis for your training in the last two years? ☒ Yes.a. YES ☒ b. NO ☐

\* If no, go to Part III. Otherwise continue with Parts I, II, III.

2. Has your organization done cost benefit analysis for your ACTION TASK TRAINING in the last two years? ☒ Yes.a. YES ☒ b. NO ☐\* If no, please comment or indicate reason(s) below by ☒ as appropriate.(1) Lack of a system? ☐ (2) No direction to do so? ☐ (3) Too Costly? ☐ (4) Not a major concern? ☐

Comments:

3. Has your organization done cost benefit analysis for your COGNITIVE TASK TRAINING in the last two years? ☒ Yes.a. YES ☒ b. NO ☐\* If no, please comment or indicate reason(s) below by ☒ as appropriate.(1) Lack of a system? ☐ (2) No direction to do so? ☐ (3) Too Costly? ☐ (4) Not a major concern? ☐

Comments:

## PART II ABOUT THE APPLICATION OF COST BENEFIT ANALYSIS FOR TRAINING

1. As a result of your experience as a training director, what is considered important data in identifying criteria necessary for the application of cost benefit analysis to your ACTION TASK TRAINING?

Please use the following scale to rate the importance of the data listed and comment as you desire.

	1	2	3	4	5
a. POLICY on use of cost benefit analysis for Action Task Training.					
b. TRAINING REQUEST (Training requirements, objectives).					
c. TRAINING NEEDS ANALYSIS?					
d. TRAINING AND OTHER COSTS (accounting, production, sales).					
e. PERFORMANCE TASK (by steps).					
f. PERFORMANCE STANDARDS?					
g. DEVELOPMENT AND PRE-TEST OF COST BENEFIT ANALYSIS MODEL (S).					

Comments:

Extremely Important  
Very Important  
Important  
Somewhat Important  
Extremely Unimportant

2. As a result of your experience as a training director, what is considered important data in identifying criteria necessary for the application of cost benefit analysis to your COGNITIVE TASK TRAINING?

Please use the following scale to rate the importance of the data listed and comment as you desire.

	1	2	3	4	5
a. POLICY on use of cost benefit analysis for Cognitive Task Training.					
b. TRAINING REQUEST ( Training requirements, objectives).					
c. TRAINING NEEDS ANALYSIS?					
d. TRAINING AND OTHER COSTS ( accounting, production, sales) .					
e. PERFORMANCE TASK ( by steps) .					
f. PERFORMANCE STANDARDS?					
g. DEVELOPMENT AND PRE-TEST OF COST BENEFIT ANALYSIS MODEL (S) .					

Comments:

3. How does cost benefit analysis contribute to your duties as director of training?

Please use the following scale to rate the usefulness of cost benefit analysis.

Cost benefit Analysis conducted on ACTION TASK TRAINING IS: ✓

	1	2	3	4	5
a. Useful in compiling budget data.					
b. Useful in proving the worth of training.					
c. Useful in obtaining training funds?					
d. Useful in program continuation decisions.					
e. Useful in supporting organizational goals.					

Comments:

4. How does cost benefit analysis contribute to your duties as director of training?

Please use the following scale to rate the usefulness of cost benefit analysis.

Cost benefit Analysis conducted on COGNITIVE TASK TRAINING IS: ✓

	1	2	3	4	5
a. Useful in compiling budget data.					
b. Useful in proving the worth of training.					
c. Useful in obtaining training funds.					
d. Useful in program continuation decisions.					
e. Useful in supporting organizational goals.					

Comments:

6. When cost benefit analysis is applied to training, what is the schedule for conducting the analysis? Please check the appropriate frequency or comment for the types of training listed below.

	ACTION TASK TRAINING (1)	COGNITIVE TASK TRAINING (2)
a. Within one year.	<input type="checkbox"/>	<input type="checkbox"/>
b. Within six (6) months after each session.	<input type="checkbox"/>	<input type="checkbox"/>
c. Within six (6) months after program completion.	<input type="checkbox"/>	<input type="checkbox"/>
d. No set period, usually as agreed to in each training program.	<input type="checkbox"/>	<input type="checkbox"/>

Other comment:

6. Overall, how satisfied was your organization with the impact of the results of cost benefit analysis conducted on your training in the last two years.

	1	2	3	4	5
Check one for each question. ✓					
a. For ACTION TASK TRAINING?					
b. For COGNITIVE TASK TRAINING?					

### PART III ABOUT YOU AND THE SCOPE OF YOUR ORGANIZATION'S PROGRAM

1. How many years, to the nearest year, have you been director of training (or equivalent) for this company?	____ yrs.
2. How many years of experience, to the nearest year, do you have as a training professional? (Include present position)	____ yrs.
3. What is the highest education you have attained? High School, Associate degree, Bachelor degree, Master degree, Doctoral degree:	Circle One H A B M D

4. The scope of your overall training responsibility covers how many employees of this company? ✓ one.

a.	b.	c.	d.	e.	f.	g.	h.	i.
1-20,000 employees	20,001-40,000	40,001-60,000	60,001-80,000	80,001-100,000	100,001-120,000	120,001-140,000	140,001-160,000	Over 160,001

5. What was your total estimated training budget for 1988? Check one box.

a.	b.	c.	d.	e.	f.	g.	h.	i.
1-50,000 dollars	50,001-100,000	100,001-150,000	150,001-200,000	200,001-250,000	250,001-300,000	300,001-350,000	350,001-400,000	400,001 or more

**THANK YOU FOR SHARING YOUR EXPERTISE:**

Respondents Name: \_\_\_\_\_ Title \_\_\_\_\_  
Address \_\_\_\_\_ City \_\_\_\_\_  
State \_\_\_\_\_ Zip Code \_\_\_\_\_  
Telephone Number : Area Code \_\_\_\_\_ Number \_\_\_\_\_

☐ I would like to receive a summary of your study, please send it to the above address.

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**PLEASE RETURN THE COMPLETED QUESTIONNAIRE TO:**  
Oklahoma State University  
Rudolph A. D'Andrea  
712 Procter Place  
Midwest City, Oklahoma 73110

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**PILOT-TEST COMMENTS:**

- 1.
- 2.
- 3.

**APPENDIX G**

**REPORT ON PILOT TEST RESULTS**

## REPORT ON RELIABILITY PILOT TEST OF THE QUESTIONNAIRE

INTRODUCTION: An instrument had been developed to survey the Fortune 200 industries director's of training to determine the use of cost benefit analysis on two major types of task training, Action Task Training and Cognitive Task Training. This reliability pilot test was made to have a group of directors of training or equivalent training administrators in Oklahoma City metropolitan area industries test and review the cover letter, instructions and complete the questionnaire. After which they would answer pilot test questions (1) Did you understand the questions? (2) Do you think other directors of training would understand the questions? and (3) Do you have any recommendations for improvement in content, format or structure?

PURPOSE: It was desirable to have a group of directors of training that had considerable experience, expertise and education in managing industrial type training to help pilot test and review the questionnaire for reliability of purpose prior to surveying the Fortune 200 population.

METHOD: The pilot test of the draft cover letter, instructions and questionnaire, was conducted by personal contact with training administrators in fifteen Oklahoma industries. Those selected closely met the purpose of the exercise. This included respondents in private industry and government activities. Some were members of the American Society for Training and Development. The participants were given the material, after a short introduction as to the purpose of the exercise. They were told to read the cover letter, instructions and complete the questionnaire questions and pilot test questions. Most chose to do so immediately, two chose to mail the questionnaire back. Those that were mailed back showed no particular differences in response than those completed during the visit. Some of the industries were local divisions of Fortune companies. All of the participants were most congenial. The majority expressed an interest in the study and requested a summary be sent to them.

RESULTS: The results of the pilot test indicated the following information about the participants. The number of years as director of training with the industry ranged from 2 to 20 years. The average was 7 years. The number of years experience as a training professional ranged from 10 to 28 years. The average was 17 years. The majority, 53 percent, had Masters degrees, 13 percent had Doctorate degrees and 33 percent had Bachelor degrees. The number of employees for which they had training responsibility was twelve activities 1-20,000 employees, two activities 40,000 - 60,000 employees and one over 160,000 employees.

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The estimated training budgets for 1988 were five at \$1-50,000 ; one \$50,001-100,000 ; three \$150,001-200,000 ; one \$200,001- 250,000; and four over \$400,000.

On use of cost benefit analysis formally or informally for any training in the last two years, 87% reported yes and 13 % No.

On use of cost benefit analysis for Action Task Training in the last two years, 73% reported yes and 27 % no. Those who said no reported the reason(s) as lack of system and not a major concern.

For use of cost benefit analysis on Cognitive Task Training in the last two years, 67 percent reported yes and 34 percent no. The reason(s) for the no answers were reported as lack of system and not a major concern.

About Important criteria for cost benefit analysis application to:

Importance:	rating:	ATT					CTT				
		1	2	3	4	5	1	2	3	4	5
Policy.....	%	.08	.33	.50	.08	.0	.17	.17	.33	.33	.0
Training Request.....	%	.33	.33	.17	.17	.0	.17	.42	.25	.17	.0
Needs Analysis.....	%	.50	.25	.25	.0	.0	.50	.33	.17	.0	.0
Training & other costs...	%	.42	.33	.25	.0	.0	.25	.33	.42	.0	.0
Performance Task.....	%	.42	.33	.25	.0	.0	.17	.08	.75	.0	.0
Performance Standards....	%	.42	.42	.17	.0	.0	.33	.17	.50	.0	.0
CBA model.....	%	.17	.50	.17	.0	.0	.25	.33	.25	.17	.0

About Usefulness of cost benefit analysis to duties?

Useful in:	rating:	ATT					CTT				
		1	2	3	4	5	1	2	3	4	5
compiling budget data....%		.50	.42	.08	.0	.0	.33	.33	.33	.0	.0
proving worth of training%		.75	.17	.08	.0	.0	.33	.58	.08	.0	.0
obtaining funds.....%		.42	.50	.08	.0	.0	.42	.33	.25	.0	.0
program continuation dec.%		.42	.58	.0	.0	.0	.25	.42	.33	.0	.0
support of organization..%		.58	.42	.0	.0	.0	.42	.58	.0	.0	.0

About when is cost benefit analysis scheduled to be conducted?

	ATT	CTT
Within one year.....%	.14	.14
Within six (6) months after each session.....%	.29	.29
Within six (6) months after program completion.%	.14	.14
No set time, as agreed in training program.....%	.43	.43

About satisfaction of results of application of cost benefit analysis, the following was reported.

	rating:	1	2	3	4	5
		CS	S	NSU	SD	D
Action Task Training:	%	.08	.50	.33	.0	.08
Cognitive Task Training:	%	.08	.08	.67	.08	.08



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## Pilot test questions:

Did you understand the questions? Yes.93 percent

\* No .07 percent

\* Comment: did not understand CBA model question Part II 2.g.

Did you think other directors of training would understand the questions? Yes .93 percent

\* No. .07 percent

Comment: \* most are clear except Part II 2.g.

Do you have any recommendations on content, format, structure?

## Part I Question 1. show formal or informal CBA

- |     |  |
|-----|--|
| I   | 3. Results of cognitive training are measured by managerial readiness & communications skills.                         |
| I   | 3. Need more formalized methods.   |
| II  | 1. Establishment of measurable performance standards is critical not only to CBA but to development of the individual. |
| II  | 1. CBA procedures have been in place for years and no further models should be needed.                                 |
| II  | 5. A front-end analysis is done with most training to determine what is the most efficient method of training.         |
| II  | 5. Follow-up needs to continue throughout the year as business and training needs change.                              |
| II  | 6. We need to develop better techniques for CBA for our training.  |
| III | 4. & 5. Range employees too high, Budget too low.  |
| III | 4. Change range to small med large, see numbers.   |
| III | 4. Change lower end to show smaller organs.  |

**APPENDIX H**

**RESPONDENT'S COMMENTS**

## SUMMARY OF RESPONDENTS COMMENTS

The following are paraphrases of other comments input by respondents to the study about use of cost benefit analysis for training.

1. The schedule for conducting cost benefit analysis is tied to each program cycle and usually to the fiscal year.
2. Action Task Training is responsibility of the operating levels and is not planned , coordinated or funded at this corporate level.
3. The schedule for conducting cost benefit analysis is planned prior to the training.
4. In the past, analysis was informal but it now beginning to be more formal.
5. Our training development system considers cost benefit analysis and model to be an integral part of the front end (meeting with customer) and analysis (defining the requirements).
6. Letting employees know they are respected and their growth is important to the company is part of the trainers message. We do not believe benefits can or should be directly linked to bottom line results.
7. Program needs are more important than budget requirements. Strategic direction and outcomes drive budget, not costs.
8. We are not certain cost benefit analysis received the weight it deserves. Wants outweigh rational analysis.
9. For Cognitive Task Training, it is very difficult to evaluate the impact of cost benefit analysis on training.
10. Primarily we track production of an employee after training , and then performance after one year.
11. Just now asking for data in the schedule area, this is newly instituted process.
12. Our Management and Supervisor training tends to be skill based and as such is Action Task Training.
13. We are in the middle of an analysis, no post results until next year.

14. Developing a corporate edition of corporate business strategy and return on investment impact measures.
15. Cognitive Task Training is corporate level concern, but cost benefit analysis is not yet done. It is hard to get a handle on how much more effective supervisors are in coaching their employees by spending \$500 on a course. This is still an area of major concern.
16. Do not use a great deal of formal analysis, but, plan to use benefits (or perceived) benefits for marketing purposes.

VITA

Rudolph Anthony D'Andrea

Candidate for the Degree of  
Doctor of Education

Thesis: THE USE OF COST BENEFIT ANALYSIS ON ACTION TASK AND COGNITIVE  
TASK TRAINING IN THE FORTUNE 200 INDUSTRIES

Major Field: Occupational and Adult Education

Biographical:

Education: Graduated from Central High School, Providence, Rhode Island, 1947; received Bachelor of Arts degree in Psychology from Oklahoma City University in May, 1968; received Master of Arts degree in Public Administration from the University of Oklahoma in May, 1973; completed requirements for the Doctor of Education degree at Oklahoma State University in December, 1989.

Professional Experience: United States Government, Civil Service, Department of Defense, 1948 to 1976, retired as a Branch Chief; Adjunct Instructor, September, 1976, Department of English and Related Studies, Oklahoma State University Technical Institute; September, 1978, Assistant Professor, Writing Technology and Political Science, Oklahoma State University Technical Institute; Associate Professor, Political Science and Writing Technology, Oklahoma State University Technical Branch, Oklahoma City, Oklahoma, July, 1984 to present.

Affiliation: American Society for Training and Development, American Association of University Professors, Society for Technical Communication, Higher Education Alumni Council of Oklahoma.