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# The Effects of Types of Training on Support of Training Among Corporate Managers

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## ABSTRACT

With organizations becoming leaner during times of cost consciousness, it is becoming critical that training departments demonstrate their contributions to their bottom lines by becoming more productivity based than they have been historically. For training professionals to obtain the needed financial and organizational support of their training efforts, top management should corroborate the training function. To gain this support, training professionals have evaluation procedures available to them.

My purpose for conducting this study was to determine which type of training evaluation method (reaction, learning, behavior, or results) elicited the most management support of the training function among corporate managers. I designed and distributed a case study survey instrument (TEMS) to assess the extent of this support. MBA students with management experience and non-training managers participated in the study.

For both samples, the data indicated that the results evaluation format received the most support, with progressively less support for behavior, learning, and reaction evaluations, respectively.

I believe that this study provides training practitioners with a mandate for demonstrating training results to top management. It further gives an accountability system for gaining management support of the training function.

## Problem Statement

Training professionals are being faced with the reality of demonstrating how their function contributes to organizational productivity, as corporations become leaner in the 80's. One way they can accomplish this is by becoming more productivity based than they have been historically. Of significance is the demonstration of how training contributes to overall organizational productivity. In the past, I have found that upper management often wanted to know that trainers thought training was relevant and that learning occurred. However, Brown (1980) noted that more recently:

> Upper management has begun to look at all training as an investment. By looking at training as an investment, it has become increasingly important to determine what economic benefits may be directly attributed to training programs. This recent emphasis on return on investment for training dollars has made several evaluation techniques of prime importance for training directors who are being held accountable for the results their programs are designed to achieve. (p. 11)

A common complaint of training professionals is lack of management support of training (Dobbs, 1980). In addition, it is my perception that training managers have not consistently conducted effective evaluation programs for convincing top management that training can contribute to an organization's bottom line results. According to a survey of *Training and Development Journal* readers, a primary reason that training professionals have not conducted evaluation is that one third regarded evaluation as their most difficult task (Galagan, 1983). I have found that management has sometimes reacted to training departments that do not contribute to the organizational bottom line by reducing or eliminating these departments that do not have a substantial impact on an organization's bottom line results, particularly during times of budget trimming (Barta, 1982; Kelley, Orgel & Baer, 1984; Zenger & Hargis, 1982). These cost conscious measures have placed pressure on training personnel to demonstrate to those management staff responsible for budgeting operations that training can contribute to the productivity of the organization. It is my perception that the problem becomes one of discerning how to most effectively evaluate training to demonstrate its impact on the organizational bottom line.

## Review of Literature

There are four types of evaluation methods that training personnel typically use to assess training effectiveness. These include the following identified by Kirkpatrick (1977, 1979, 1983a, 1983b): (a) *reaction* by the trainee to training, (b) *learning* that occurred by the trainee, (c) *behavior* changes of the trainee on the job, (d) *results* that reflect changes in organizational or departmental productivity.

*Reaction evaluation* is an immediate assessment following training. This form of evaluation focuses on how the trainee felt about the training program overall, its content, methods, and the skill of the facilitator.

*Learning evaluation* is an assessment of how well the trainee retained the material taught in the seminar. This form of evaluation focuses on the difference between a pre-measure and a post-measure of learning. Measures usually occur immediately before training (a pretest) to several months after training (a posttest).

*Behavior evaluation* methods assess on-the-job changes in trainee performance through a variety of pre-post measurement systems. This evaluation method assesses how effectively the trainee applies the learning to the job. The trainee, the trainee's supervisor, subordinates, and/or peers may complete a behavior evaluation. In the behavior evaluation format, the pre-measure usually occurs immediately before training while the post-measure usually occurs three or more months after training.

*Results evaluation* uses objective productivity indices to demonstrate the effectiveness of the training program. These indices may include such factors as number of employee grievances, number of disciplinary actions, number of sales contracts, absenteeism figures, sales volume, and turnover rates. These statistics

are associated with pre-training and post-training measures of productivity.

Several researchers have investigated the trainer's frequency of use for each of the four evaluation types: reaction, learning, behavior, and results. In one study, researchers found that reaction evaluation formats had the highest frequency of use with progressively less frequency of use for learning, behavior, and results evaluation formats, respectively (Catalanello & Kirkpatrick, 1975). In a survey of 285 training officers in industry, training officers stated that they used reaction evaluation 73% of the time, learning 82%, behavior 19%, and results 12% (Smeltzer, 1975).

***It is my perception that training managers have not consistently conducted effective evaluation programs for convincing top management that training can contribute to an organization's bottom line results.***

In my view, managers are demanding greater accountability for training to prove its worth to the organization. "'Accountability' means requiring the training staff to produce documented evidence of training quality and efficiency on a regular or periodic basis." (Smith, 1980, p. 74). Top management is seeking and demanding proof that training investment pays off for the organization through improved productivity" (Salinger, 1981).

One strategy for determining training's impact on bottom line productivity is use of the results-oriented evaluation format with the multiple baseline design. The multiple baseline design assesses the same training program with different groups at staggered points in time. Two types of multiple baseline designs are available to training professionals for evaluation of training efforts: (a) multiple baseline design across behaviors or results variables, and (b) multiple baseline design across subjects or groups.

The first design, across behaviors or results variables, evaluates the effects of one training intervention on two or more different behaviors or productivity results. The second design, across subjects or groups, assesses the effects of a training intervention on two or more classifications or groups of employees.I believe that the multiple baseline design has been underutilized in industry. The multiple baseline design is one approach for evaluating the impact that training has on either behavior or results because it is practical and effective in the business world (Brown, 1980).

In my training practice I have discovered that most training professionals have not incorporated the results-oriented method into their evaluation strategies. Top management is often asking that the training investment pay off for the organization through improved productivity. What is significant is the fact that the

productivity indicators used in results-oriented evaluations can be used to demonstrate to top management that training can contribute to the financial well-being of the organization (Trapnell, 1984).

## Research Questions

According to the review of the literature, results-oriented evaluations are associated with training accountability, and accountability is what top management demands of the training function. From this perspective, it would appear that corporate managers would be most likely to support those training efforts that use results evaluation. Subsequently, I am asking whether corporate managers are more likely to support training based on results evaluations than other evaluation methods. In particular, I am posing three research questions:

1. Are MBA managers more likely to support training that uses results evaluation than either reaction, learning, or behavior evaluation?
2. Are non-training managers more likely to support training that uses results evaluation than either reaction, learning, or behavior evaluation?
3. Are non-training and MBA managers (collectively) more likely to support training that uses results evaluation than either reaction, learning, or behavior evaluation?

## Methods

### Population

I used two populations in this study–part-time MBA students and non-training managers in industry. A total of 90 MBA students from four required classes from a local college participated. I eliminated from the study training managers and respondents who were not managers.

The second population that I used consisted of a random sample of 75 non-training managers from a total of 150 managers within a health care company headquartered in the Twin Cities.

### Instrumentation

I used the Training Evaluation Methods Survey (TEMS), which I developed, to assess the level of management support of training for each type of evaluation method. The TEMS described four scenarios, each of which illustrated one of the four evaluation types that Kirkpatrick described: reaction, learning, behavior, and results. Each scenario was a detailed work simulation of each evaluation type. Following each scenario was a final question designed to assess management support. At the end of the TEMS were a series of questions for demographic information of each participant.

### Validity Study

To be certain that each scenario description was an accurate illustration of each evaluation type, I used expert opinion for arriving at the validity of these descriptions. The pilot study consisted of my disseminating the survey to a class of 20 graduate students in the Training and Development Program at a local university.

### Reliability Study

To establish the reliability of the TEMS, I randomly distributed the TEMS to 20 managers in three de-

**TABLE 1**

**Test-retest Reliability Coefficients (N = 20) for Each Evaluation Section and Final Overall Section of the TEMS**

| Section of TEMS | Reliability Coefficient |
|---|---|
| Reaction | .93 |
| Learning | .96 |
| Behavior | .89 |
| Results | .88 |
| Final | .95 |

partments at a local health care organization. Using a test-retest reliability procedure, I asked these individuals to complete the TEMS. One week after the first administration of the TEMS, I readministered the TEMS to this same group of individuals.

### Procedure

To reduce the bias associated with the order of presentation of the evaluation scenarios, I randomly ordered the four scenarios. I distributed the TEMS to MBA students in their class. I further instructed the MBA students to complete the TEMS during class time. For the manager sample, I randomly selected 75 out of a total of 150 managers at a local health care organization.

This single factor block design study included four decisions — corresponding to each evaluation scenario — that each subject made regarding level of support. I used a two-way ANOVA to determine if there was a significant difference in level of support. I further used a chi-square analysis to determine if there was a significant difference between the MBA group and the manager group.

In order to determine if there were interaction effects that contributed to the data obtained, I collected demographic information on each respondent and graphed scatter plots to assess interaction effects.

## Results

Results from the validation procedure indicated that the TEMS measured the four evaluation types — reaction, learning, behavior, and results. Table 1 lists the Pearson product-moment correlation coefficients for each section of the TEMS, indicating high reliability.

In the MBA sample, the response rate was 100%. I eliminated 27 respondents from the study; these re-

spondents were either non-managers or training managers. With the 27 respondents eliminated, there were 63 completed TEMS that I used in the data analysis. In the manager sample, the response rate was 56%.

Scores on the TEMS ranged from 1 through 5 with the following benchmark values:

1. Unlikely to give support.
2. Minimally likely to give support.

**TABLE 2**

**Average Responses, Standard Deviations, and Percent of Support for Each Type of Training Evaluation Method for Each Subject Group**

| Subject Group | Values on a 5 Point Likert Scale | | |
|---|---|---|---|
| | Average response | Standard deviation | Percent of support |
| **MBA** (N = 63) | | | |
| Reaction | 2.80 | .96 | 0 |
| Learning | 3.39 | .91 | 5 |
| Behavior | 3.57 | .88 | 9 |
| Results | 4.44 | .59 | 86 |
| **Manager** (N = 42) | | | |
| Reaction | 3.33 | 1.00 | 0 |
| Learning | 3.63 | 1.05 | 12 |
| Behavior | 3.75 | .87 | 9 |
| Results | 4.44 | .55 | 79 |
| **Combined** (N = 105) | | | |
| Reaction | 3.01 | 1.02 | 0 |
| Learning | 3.49 | .97 | 8 |
| Behavior | 3.64 | .87 | 9 |
| Results | 4.44 | .57 | 83 |

3. Somewhat likely to give support.
4. Likely to give support.
5. Very likely to give support.

Table 2 lists the average support scores and standard deviations for all three subject groups — MBA students, managers, and the combined sample of MBA students and managers. For all three subject groups, the results evaluation format received the most support, with progressively less support for behavior, learning, and reaction evaluations, respectively.

For the MBA sample, the ANOVA indicated significant results, $F(3, 186) = 64.05, p<.0001$, demonstrating that the results evaluation received the most support. For the manager group, the ANOVA indicated significant results, $F(3, 123) = 17.08$, $p<.0001$, demonstrating that the results evaluation received the most support. For the combined group, the ANOVA demonstrated significant results, $F(3, 312) = 74.71, p<.001$.

Table 2 also shows the percentage of respondents who selected the evaluation scenario for which they gave the most support for each subject group. I believe that these descriptive statistics clearly demonstrate the high degree of support of the results evaluation format by corporate managers.

I further computed a chi-square to determine if there was a significant difference between the MBA group and the manager group. Results showed a $X^2(2, \underline{N} = 105) = 1.84$, indicating no significant difference between the MBA group and the manager group. I found no interaction effects between any of the evaluation types and title, years of experience, number of people managed, annual budget, or sex.

## Conclusions

This study provides trainers with a mandate for demonstrating training results to top management and for gaining management support of training. Both sample groups clearly gave more support to training that uses results evaluation than either reaction, learning or behavior evaluation.

With financial accountability of increasing concern in industry, it is becoming necessary to consider training approaches that are associated with this financial perspective. I believe that this research demonstrates a need for establishing training accountability since management is more supportive of training that uses the results-oriented evaluation format.

A few individuals commented on the TEMS that they could see value in combining evaluation methods. This idea is worth exploring in further detail. While I asked respondents to select only one choice related to their overall level of support, it may be that a combination of methods is more effective than one single evaluation method, e.g., using both the results and behavior evaluations. This study did not assess the effects that combinations of evaluation formats have on level of managerial support.

I firmly espouse that without a training accountability system such as the one presented here, the vitality of the training function is likely to remain at the discretion of non-training professionals who control the budgeting process. With such an accountability system, I believe that