CHAPTER TWO

LITERATURE REVIEW

2.1 Evaluation and the Training Cycle

For the last 30 years, many articles in training journals has commented the shortage of rigorous training evaluation efforts (McEvoy, 1990). It is easy to write about training evaluation but it is not a simple matter to conduct a training evaluation. Perhaps the first step then is to define what is evaluation.

Evaluation is the systematic appraisal by which one determines the worth, value or meaning of something to someone. Evaluation of training is a part of the training cycle which starts with identification of the problem, proceeds through the diagnostic phase, where training is the solution and continues through to the design and delivery of the training course (See Figure 1). Evaluation seeks to assess whether the learning objectives originally identified has been achieved and any deficiency rectified. Evaluation then is an assessment made about the effectiveness of the training provided. Yet evaluation has been said to begin even before the instructional stage (ASTD, 1994). For training evaluation to be effective, evaluation instruments must be based on the initial work : needs assessment results and programme objectives.

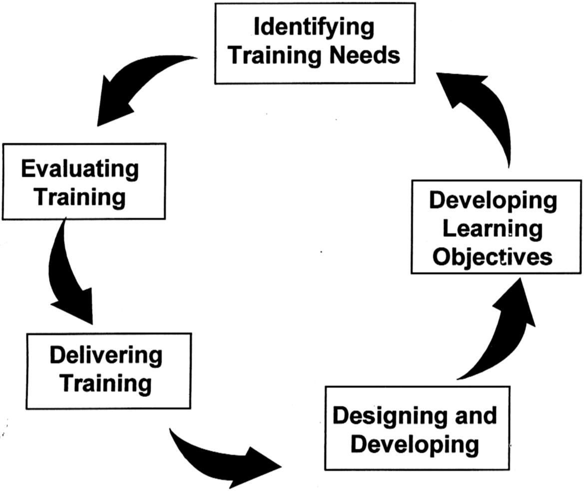

Figure 1 : The Training Cycle

2.2 Identifying Training Needs

The key to conducting a training needs analysis is finding the right solution to the right problem. The classic approach to determine the problem is to identify the discrepancy between the expected and actual performance. In identifying and analysing training needs, it is important to keep in mind that training is not necessarily the solution to performance problems in the workplace. Apart from the lack of knowledge and skills, the causes of the problem could be due to:

- o inadequate incentives
- o wrong job-person match
- o poor work place conditions
- o no proper performance measurement

The total training needs analysis process basically involves 6 steps (Nowack, 1991).

Step 1: Conducting a job profile

A job profile can help determine the specific tasks and behaviours that are important to a particular job. It contains specific definitions of job requirements under which groups of related behaviours can be reliably classified. Typically, a job profile results in 12 to 15 categories or dimensions. The number of dimensions depends on the nature of the job, the complexity of the tasks, and the skills required for effective job performance.

The first step in the analysis is to clearly define the jobs for which true training needs are to be identified. Subject matter experts, or SMES, provide input on important skills through interviews, focus groups, and surveys.

The groups then compile a list of dimensions in the following areas:

- relevant technical knowledge and experience
- interpersonal skills
- administrative skills
- supervisory or management skills
- decision making and problem solving skills
- communication skills

The groups then rate the importance of each dimension to a particular job on a 3-point Likert Scale: "very important", "important", or "not important". They also indicate the frequency that is spent on each dimension, namely, "several times a day", "several times a week", "several times a month" or "several times a year". Finally, all data from the interviews are combined to prepare the job profile.

Step 2: Developing the Questionnaire

The questionnaire should target specific job levels within the organisation. For example, there would be the senior management, middle management, executives and the support staff. The questionnaire generally comprises three main sections:

- questions on job environment or employee attitude
- job dimension summary ratings
- demographic information

Climate or employee attitude questions pinpoint internal and external barriers that may influence training effectiveness.

Typical items on a climate survey seek to identify employee attitudes and perceptions of organisational policies and procedures, benefits, career opportunities, job satisfaction, work environment, and managerial practices. The section on job dimension summary ratings includes a list of dimensions extracted from the job profile. Two types of ratings are made for each dimension: how important the dimension is to the job and how proficient an employee is in that dimension. Typical demographic items include an employee's job position, location, years with the organisation and time in the current position.

For each job-relevant dimension listed, respondents are to rate its importance and their proficiency in it.

Step 3: Administering the Questionnaire

First, it should be determined whether all employees or only a sample will receive the questionnaire. The decisions should be based on the size of the organisation and the resources that are available for administering the questionnaire. Where possible, a convergent approach is used to allow a comparison between the employees' perceptions of their own training needs with that of their supervisors.

Step 4: Analysing the Questionnaire

A statistical software programme, such as the Statistical Package for the Social Sciences, can assist in the analysis of the questionnaire. To get a quantitative measure of the training needs, each dimension's importance ratings is multiplied by the proficiency ratings for each respondent. The mean importance times the mean proficiency scores (IxP) is then compared across all dimensions in the questionnaire. The higher the mean score, the more critical a training need is for a particular job. For example, a respondent rates "delegation skills" as "very important" (5) to his or her job, and rates his or her own proficiency in those skills as "none at all" (5). The IxP score for that skill and that respondent would be 5x5 or 25, which indicates a critical need for training delegation skills. With a convergent approach, one can directly compare the mean IxP scores of two or more groups.

Step 5: Interpreting the Results

Once a statistical analysis is completed, one can analyse the findings.

First, the following questions should be answered:

- o Do the top-ranked training needs contain common content?
- o What is the meaning of any statistically significant differences in the way training needs are perceived by employees compared with managers?
- o What is the meaning of the differences in training needs across any demographic factors?

Step 6 : Feedback

Feedback to both respondents and managers should be well planned. One can use such means as executive summaries, reports, briefings, employee feedback meetings, newspaper articles and staff memos.

A written summary report should include a brief description of the questionnaire's design and administration, information on its major findings, an interpretation of the results and recommendations. It should also include an appendix of statistical analyses.

2.3 Developing Learning Objectives

Before designing a new training programme or revising an existing one, it is important to ask what the programme intends to accomplish. Designing training programmes using instructional objectives are more specific than at the curriculum level. According to Mager (1962) learning goals need to contain three elements:

- Outcomes

  What will the trainee be able to do after the training?

- Conditions

  Under what conditions will the trainee be able to do?

- Criteria

  How will successful behaviour or performance be identified?

In specifying outcomes, a training course objective should describe what the trainee will be able to do. The objective should not describe that which cannot be observed such as "understand" or "appreciate". Training objectives should therefore be measurable and observable.

The key word in a learning objective is the verb. For example:

"Upon completing the course, the trainee will be able to <u>list</u> out the factors affecting the foreign exchange movement."

The key steps in writing objectives are:

o Select precise words associated with a learning centre.

o Specify the conditions in which the behaviour will occur e.g. "given the currency quotes, the trainee will be able to calculate the exchange rate for the US dollar".

o Specify the criterion indicative of successful performance for example "given one minute, the typist will be able to type 120 words".

Dugan Laird (1989) suggested that there is value in writing objectives for a training programme as the learning can be specified. According to him, trainers will have a better basis for making good decisions while learners, a better sense of why and how well they are learning.

2.4 Designing and Developing Programmes

Once the objectives have been specified, the contents of the programme can be determined. Trainers need to ascertain what topics should be covered at this stage. They need to prepare the lesson plan and select the appropriate media and method for delivery. For example, a trainer teaching an interpersonal skills course will use behaviour modelling and role play in his sessions. In cases of complex procedure, job aids should be considered. Techniques that can have classroom applications include games, simulations, computer-based training, videos, case studies and lectures. Trainers normally build adult-learning principles into their training experiential exercises in order to encourage self-directed learning.

2.5 Delivering Training

In delivering training, a major challenge faced by most trainers is motivating learners to learn. According to Bernard L. Rosenbaum and Barbara Baker (1977) there are specific trainer behaviours that support adult-learning principles which will increase the trainees' motivation to learn such as:

(i) Maintain and enhance the self esteem of participants

(ii) Focus on participants' behaviour and not on personality or attitude

(iii) Actively listen to show understanding

(iv) Use reinforcement to shape learning

(v) Set goals and follow-up dates and maintain communications

Trainers who want to get some active train involvement in learning can use a range of participative techniques around their lecture skills. Regardless of subject matter, a good training session requires careful organisation and a clear and sincere delivery. Pat Burke Guild (1983) suggested using role plays, group discussions and brainstorming to involve learners in training:

2.6 Evaluation of Training

2.5.1 Purposes and Uses of Evaluation

Jack J. Phillips (1991) in his Handbook of Training Evaluation and Measurement Methods list ten purposes and uses of evaluation:-

- Determine whether a programme has achieved its objectives

  Every well designed program should have objectives. The objectives should be S.M.A.R.T. namely; Specific, Measurable, Attainable, Realistic and Time bound.

- Identify the strengths and weaknesses in the training process

An evaluation can serve as a tool to determine the effectiveness of the various components of a training programme. These include presentation methods, learning environment, programme content, training aids, scheduling and the trainer. Factors may be related to the methods by which training material is being presented (lecture versus slide presentation) or they may be environmental factors such as the noise level, the seating arrangement and lighting in the classroom area. The training programme's curriculum, the quality of instruction by the various instructors, the adequacy of teaching aids and facilities or the time allocated for training is expanded, are all variables which a training co-ordinator may want to assess as they analyse the training process.

o Determine the cost/benefit ratio of a training programme

An important reason for evaluation is to determine whether or not the training programme justifies the cost. This aspect of evaluation compares the cost of a programme to its usefulness on value. For example, a word processing programme is conducted for typists to increase the speed of typing. The number of typed work is compared before and after the training programme. The resulting benefit or value of the programme can be estimated. This value, in turn, is compared with the cost of the programme to calculate a cost/benefit ratio over a predetermined time period.

o Decide who should participate in future programmes

A follow-up evaluation can determine the benefits of a programme. Communicating these to prospective participants can help them decide whether or not they need to be involved in the programme. For example, an advanced management seminar was offered to all departmental managers. Part of the programme involved the implementation of specific projects after the programme was completed. Information obtained from the follow-up evaluation revealed the type of projects undertaken and what results were achieved. The communication of this information to other members of the management group enabled potential participants to help decide if they should attend the programme.

- o Test the clarity and validity of test, questions and exercises

  Evaluation provides a mechanism for instruments to be validated. Exercises, questions and tests used in the training process should be validated. They must measure the skills, knowledge and abilities the programme is designed to teach.

- o Identify which participants benefitted the most or the least from the programme

  An evaluation can determine which participants did well and which failed in implementing the skills or knowledge taught. For example, a course on creative thinking was offered to a group of officers. The selection of participants was left to the department. After the course was completed, follow-up evaluations were conducted with all participants. This follow-up served to identify which participants were more successful in their efforts.

- Reinforce major points made to participants

  A follow-up evaluation can reinforce major points covered in a programme by attempting to measure the results accomplished by participants. For example, a programme on Effective Meetings was conducted for first line managers. As part of the programme, participants were required to conduct group meetings with subordinates on a fortnightly basis to solve problems and enhance two-way communication between the employees and the supervisors. In the follow-up evaluation, managers were reminded of what they were asked to do. Several questions focused on the number, success and problems of meetings encountered.

- Gather data to assist in marketing future programmes

  Evaluation can be a value-added service to internal customers. An evaluation can provide information to market future programmes. Questions which become relevant are:

  - Why did you attend this programme?
  - Who made the decision for you to attend?
  - How did you find out about the programme?
  - Would you recommend it to others?

o Determine if the programme was appropriate

Evaluating a programme can sometimes indicate whether or not the original problem was indeed a training problem. Very often a training programme is conducted to correct problems that cannot be corrected by training. There could be other reasons for the performance deficiencies, such as work procedures or supervision.

o Provide a data base which can assist management in making decisions

Most evaluations are centered on deciding about the future of a programme. This information can be used by the trainers, the training manager and senior managers. Apart from the above purposes and uses of evaluation, an evaluation can help the training manager manage the training activity. One can use evaluation to manage training activity through meeting organisational goals, acquiring and distributing resources, appraising employee performance and assessing.