Measuring the Training Effectiveness Among Employees

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ABSTRACT

Training is an important factor of employee in all firm's business strategy, Training is effective only if it produces desired outcome. When the organization is implementing attaining programme, there should be an ideal forum on which the evaluation scheme can be build and assessment of effectiveness of training and development activities can be done.

This paper shows that training ofemployeesis effective. Trainingeffectiveness is measured with respect to key dimensions such as career development, earnings, adoption of new skills, flexibility or job security. Older employees also pursue less ambitious goals with their training participation. Training effectiveness among employees and managers is constantly looking for more cost-effective ways to deliver training to their employees. In addition, many expenses – booking training facilities, travel costs for employees or trainers, plus employee time away from the job.

Training is a critical component in any organization's strategy, but organizations don't always evaluate the business impact of a training program. Given the large expenditures for training in many organizations, it is important to develop business intelligence tools that will help companies improve the measurement of training effectiveness. These tools need to provide a methodology to measure, evaluate, and continuously improve training, as well as the organizational and technical infrastructure (systems) to implement the methodology. Cross-functional and reporting and learning analytics provide important connections between the measures of learning effectiveness offered by a learning management system (LMS) and the larger enterprise metrics that indicate whether learning is transferred and positively affects businessresults.

Keywords: *Introduction of Training Effectiveness, Typical areas of employee training, Phases of Training Effectiveness, Measurement techniques*

INTRODUCTION OF TRAINING EFFECTIVENESS

In India, training as an activity has been going on as a distinct field with its own roles, structures and budgets, but it is still young. This field is, however; expanding fast but controversies seem to envelop any attempts to find benefits commensurate with the escalating costs of training. Training has made remarkable contributions to the improvement of all kinds. Training is essential; but doubts arise over its contribution in practice. Complaints are growing over its ineffectiveness and waste. The training apparatus and costs have multiplied but Unhappiness persists and is growing at the working level where the benefits of training should show up most clearly. This disillusionment shows in many ways - reluctance to send the most talented workforce for training, inadequate use of personnel after training, etc. greatly reduced.

Trainingeffectiveness is a communication model that translates a humanistic ideology into a complete and consistent set of practical skills." A measurement of what a given student has learned from a specific course or training event.

Training is widely understood as communication directed at a defined population for thepurpose of developing skills, modifying behavior, and increasing competence. Generally,training focuses exclusively on what needs to be known. Education is a longer-termprocess that incorporates the goals of training and explains why certain information mustbe known. Education emphasizes the scientific foundation of the material presented.Both training and education induce learning, a process that modifies knowledge andbehavior through teaching and experience. The research model described here pertains toboth training and education. Therefore, in this document, "training" refers to bothprocesses.In contrast to informal training (which is embedded in most instances of humanexchange), formal training interventions have stated goals, content, and strategies forinstruction. Our intent is to offer a general approach to intervention effectivenessresearch that addresses formal training across settings and topics. The model integratesprimary and secondary data collection with qualitative and quantitative analyses so thatthe benefits of each research technique can be applied to the evaluation of trainingeffectiveness.Training intervention effectiveness research is needed to (1) identify major variables thatinfluence the learning process and (2) optimize resources available for training interventions. Logical and progressive study models are best suited to identify the critical elementsand causal relationships that affect training effectiveness and efficiency.In training research, it is often difficult to arrive at definitive answers. Typically, manyvariables minimize effects and make results difficult to interpret. Furthermore, theamount of variance attributed to any one variable is usually small. Therefore, if trainingis to be an essential component of planned interventions, a uniform system of research isneeded to explain how training is made effective and to indicate how resources for trainingshould be organized.

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TYPICAL AREAS OF TRAINING

1. **Communications:** The increasing diversity of today's workforce brings a wide variety of languages and customs.
2. **Computer skills:** Computer skills are becoming a necessity for conducting administrative and office tasks.
3. **Customer service:** Increased competition in today's global marketplace makes it critical that employees understand and meet the needs of customers.
4. **Diversity:** Diversity training usually includes explanation about how people have different perspectives and views, and includes techniques to value diversity.
5. **Ethics:** Today's society has increasing expectations about corporate social responsibility. Also, today's diverse workforce brings a wide variety of values and morals to the workplace.
6. **Human relations:** The increased stresses of today's workplace can include misunderstandings and conflict. Training can people to get along in the workplace.
7. **Quality initiatives:** Initiatives such as Total Quality Management, Quality Circles, benchmarking, etc., require basic training about quality concepts, guidelines and standards for quality, etc.
8. **Safety:** Safety training is critical where working with heavy equipment, hazardous chemicals, repetitive activities, etc., but can also be useful with practical advice for avoiding assaults, etc.

PHASES OF TRAINING EFFECTIVENESS:-

The training procedure comprises of three phases:

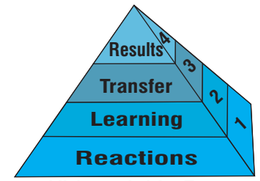
Phase 1: Pre-training: - This may also be called as the preparation phase. The process starts with an identification of the circumstances requiring more efficient performance. A firm's concern prior to training lie primarily in four areas: Clarifying the precise objectives of training and what the organization expects to make use of the participants after training; selection of appropriate participants; building favorable expectations and inspiration in the participants before training; and planning for any changes that improved task performance requires in addition to training.

Phase 2: Training: - During the course of the training, participants focus their attention on the new impressions that seem useful, thought-provoking and engaging. There is no guarantee that the participants will in fact learn what they have chosen. But the main reason remains; trainees explore in a training situation what interests them, and a training institution's basic task is to offer the required opportunities.

Phase 3: Post-Training: - This may be called as the "follow up" phase. When the trainees go back to job after attending the training, a practice of adapting change begins for each one participated. The newly acquired skills and knowledge undergo modification to fit the work condition. Participants may find their organizations offering support to use the training and also the support for continuing contact with the training institution. On the other hand, they may step into a quagmire of distrust. More effective behavior of people on the job is the prime objective of the training process conducted by an organization as a whole.

MEASUREMENT TRAININGS:

Assessing training effectiveness is critical. Donald Kirkpatrick developed a four-level model of evaluation (Figure-1).



Kirkpatrick's Four Levels of Evaluation

Figure-1

1 *Reactions:* Measures how participants have reacted to the training.
2 *Learning:* Measures what participants have learned from the training?
3 *Behavior:* Measures whether what was learned is being applied on the job.
4 *Results:* Measures whether the application of training is achieving results.

Each successive level of evaluation builds upon the evaluations of the previous level. Each successive level of evaluation adds precision to the measure of effectiveness but requires more time consuming analysis and increased costs.

Level 1 Evaluation - Reactions

This level measures how participants in a training program react to the training. Every program should at least be evaluated at this level to answer questions regarding the learners' perceptions and improve training. This level gains knowledge about whether the participants liked the training and if it was relevant to their work. Negative reactions reduce the possibility of learning.

Evaluation tools:

i) Program evaluation sheets
ii) Face-to-face interviews
iii) Participant comments throughout the training
iv) Ability of the course to maintain interest
v) Amount and appropriateness of interactive exercises
vi) Ease of navigation in Web-based and computer-based training
vii) Participants' perceived value and transferability to the workplace

This type of evaluation is inexpensive and easy to administer using interaction with the participants, paper forms.

Level 2 Evaluation - Learning

Level 2 evaluations are conducted before training (pre-test) and after training (post-test) to assess the amount of learning that has occurred due to a training program.

Level 2 evaluations assess the extent learners have advanced in knowledge, skills or attitude. Level 2 evaluation methods range from self-assessment to team assessment to informal to formal assessment.

Evaluation tools:

i) Individual pre- and post-training tests for comparisons
ii) Assessment of action based learning such as work-based projects and role-plays
iii) Observations and feedback by peers, managers and instructors line forms.

Level 3 Evaluations - Transfer

Evaluations at this level attempt to answer the question of whether the training has been transferred back to the job. This evaluation is typically performed three to six months after training. The evaluator would ask questions such as "Are the newly acquired knowledge, skills or attitude being used in the environment of the learner"? This evaluation represents the truest assessment of a program's effectiveness but is costly.

It is often impossible to predict when changes in behaviour will occur. Careful planning decisions are needed for this level of evaluation in terms of when to evaluate, how to evaluate and how often to evaluate.

Evaluation tools:

i) Individual pre- and post-training tests or surveys
ii) Face-to-face interviews
iii) Observations and feedback from others
iv) Focus groups to gather information and share knowledge

Level 4 Evaluation- Results

This evaluation measures the success of the training program in term that executives and managers can understand such as increased production, increased sales, decreased costs, improved quality, reduced frequency of accidents, higher profits or return on investment, positive changes in management style or in general behaviour, increase in engagement levels of direct ports and favourable feedback from customers, peers and subordinates. For example, after training in April 2005, the sales continued to increase throughout the year 2005 (Figure 2).

However, Level 4 evaluations are difficult to measure and correlate with training. For example, the increase in sales could be attributed to several factors such as training and product promotions.

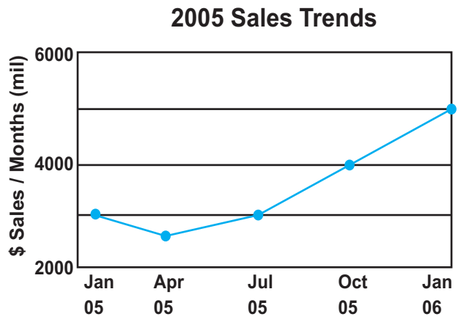


Figure 2

Evaluations:

i) **Quality training.** Measure a reduction in number of defects.
ii) **Safety training.** Measure reduction in number or severity of accidents.
iii) **Sales training.** Measure change in customer retention, sales volume, and profitability on each sale after the training program has been implemented.
iv) **Management training.** Measure increase in engagement levels of direct-reports.
v) **Technical training.** Measure reduction in time to complete tasks, forms and reports; reduced calls to the help desk; or improved use of software or systems.
vi) **Other:** Measure changes in staff turnover, number of complaints, growth, attrition, wastage, failures, non-compliance, and quality ratings, achievement of standards and accreditations and customer retention.

CALCULATE RETURN ON INVESTMENT (ROI):-

The calculation of ROI in training effectiveness or HRD begins with the basic model, where sequential steps simplify a potentially complicated process. The ROI process model provides a systematic approach to ROI calculations.

The step-by-step approach keeps the process manageable so that users can tackle one issue at a time. The model also emphasizes that this is a logical process that flows from one step to another. ROI calculation to another provides consistency, understanding, and credibility.

Calculate the ROI using the program benefits and costs. The BCR is the program benefits divided by costs:

i) BCR = program benefits / program costs
ii) (Sometimes this ratio is stated as a cost/benefit ratio, although the formula is the same as BCR).

The net benefits are the program benefits minus the costs:

i) Net benefits = program benefits – program costs

The ROI uses the net benefits divided by programs costs:

i) ROI (%) = net benefits / program costs x 100

Use the same basic formula in evaluating other investments where the ROI is traditionally reported as earnings divided by investment. The ROI from some training programs is high. For example, in sales training, supervisory training, and managerial training, the ROI can be quite large, frequently over 100 per cent, while ROI value for technical and operator training may be lower.

Collecting Post-Program Data

Data collection is central to the ROI process and is the starting point of the ROI process. Although the ROI analysis is (or should be) planned early in the training effectiveness, the actual ROI calculation begins with data collection.

The HRD staff should collect both hard data (representing output, quality, cost, and time) and soft data (including work habits, work climate, and attitudes). Collect Level 4 data using a variety of the methods as follows:

i) **Follow-up Questionnaires –** Administer follow-up questionnaires to uncover specific applications of training. Participants provide responses to a variety of types of open-ended and forced response questions.
ii) Use questionnaires to capture both Level 3 and Level 4 data. The example below shows a series of level 4 impact questions contained in a follow-up questionnaire for evaluating an automotive manufacturer's sales training program in Europe, with appropriate responses. HRD practitioners can use the data in an ROI analysis
iii) **Program Assignments –** Program assignments are useful for simple, short-term projects. Participants complete the assignment on the job, using the skills or knowledge learned in the program. Report completed assignments as evaluation information, which often contains Level 3/Level 4 data. Convert Level 4 data to monetary values and compare the data to cost to develop the ROI
iv) **Action Plans –** Developed in training and development programs, action plans on the job should be implemented after the program is completed. A follow-up of the plans provides evaluation information. Level 3/Level 4 data are collected with action plans, and the HRD staff can develop the ROI from the Level 4 data.
v) **Performance Contracts –** Developed prior to conducting the program and when the participant, the participant's supervisor, and the instructor all agree on planned specific out-comes from the training, performance contracts outline how the program will be implemented. Performance contracts usually collect both Level 3/and Level 4 data and are designed and analyzed in the same way as action plans.
vi) **Performance Monitoring –** As the most beneficial method to collect Level 4 data, performance monitoring is useful when HRD personnel examine various business performance records and operational data for improvement.

The important challenge in this step is to select the data collection method or methods that are appropriate for both the setting and the specific program and the time and budget constraints.

ISOLATING THE TRAINING EFFECTIVE:

Isolating the effects of training is an often overlooked issue in evaluations. In this step of the ROI process, explore specific techniques to determine the amount of output performance directly related to the program. This step is essential because many factors influence performance data after training. The specific techniques of this step will pinpoint the amount of improvement directly related to the program, increasing the accuracy and credibility of the ROI calculation. Collectively, the following techniques provide a comprehensive set of tools to tackle the important and critical issue of isolating the effects of training.

i) **Control Group –** use a control group arrangement to isolate training impact. With this technique, one group receives training while another similar, group does not receive training. The difference in the performance of the two groups is attributed to the training program. When properly set up and implemented, control group arrangement is the most effective way to isolate the effects of training.
ii) **Impact Estimates –** When the previous approach is not feasible, estimating the impact of training on the output variables is another approach and can be accomplished on the following 4 levels.
iii) **Participants –** estimate the amount of improvement related to training. In this approach, provide participants with the total amount of improvement, on a pre- and post-program basis, and ask them to indicate the percent of the improvement that is actually related to the training program.
iv) **Supervisors –** of participants estimate the impact of training on the output variables. Present supervisors with the total amount of improvement, and ask them to indicate the percent related to training.

v) **Senior Managers –** estimate the impact of training by providing an estimate or adjustment to reflect the portion of the improvement related to the training program. While perhaps inaccurate, having senior management involved in this process develops ownership of the value and buy-in process.

vi) **Experts–**estimate the impact of training on the performance variable. Because these estimates are based on previous experience, experts must be familiar with the type of training and the specific situation.

Customers sometimes provide input on the extent to which training has influenced their decision to use a product or service. Although this approach has limited applications, it can be quite useful in customer service and sales training.

CONVERTING DATA TO MONETARY VALUE:

A number of techniques are available to convert data to monetary values; the selection depends on the type of data and the situation.

i) Convert output data to profit contribution or cost savings. With this technique, output increases are converted to monetary value based on their unit contribution to profit or the unit of cost reduction. These values are readily available in most organizations and are seen as generally accepted standard values.

ii) Calculate the cost of quality, and covert quality improvements directly to cost savings. This standard value is available in many organizations for the most common quality measures (such as rejects, rework, and scrap).

iii) Use the participants' wages and employee benefits as the value for time in programs where employee time is saved. Because a variety of programs focus on improving the time required to complete projects, processes, or daily activities, the value of time becomes an important and necessary issue. The use of total compensation per hour provides a conservative estimate for the value of time.

iv) Use historical costs when they are available for a specific variable. In this case, use organizational cost data to establish the specific value of an improvement.

v) Use internal and external experts, when available, to estimate a value for an improvement. In this situation, the credibility of the estimate hinges on the expertise and reputation of the individual.

vi) Use external databases, when available, to estimate the value or cost of data items. Research, government, and industry databases can provide important for these values. The difficulty lies in finding a specific database related to the situation.

vii) Ask participants to estimate the value of the data item. For this approach to be effective, participants must understand the process and be capable of providing a value for the improvement.

viii) Require supervisors and managers to provide estimates when they are willing and capable of assigning values to the improvement. This approach is especially useful when participants are not fully capable of providing this input or in situations where supervisors or managers need to confirm or adjust the participant's estimate.

Converting data to monetary value is very important in the ROI model and is absolutely necessary to determine the monetary benefits from a training program. The process is challenging, particularly with the conversion of soft data, but can be methodically accomplished using one or more of the above techniques.

TABULATING PROGRAM COST:

The other part of the equation in a cost/benefit analysis is the cost of the program. Tabulating the costs involves monitoring or developing all of the related costs of the program targeted for the ROI calculation. Include the following items among the cost components.

i) Cost to design and develop the program, possibly prorated over the expected life of the program

ii) Cost of all program materials provided to each participant

iii) Cost for the instructor/facilitator, including preparation time as well as delivery time.

iv) Cost of the facilities for the training program.

v) Cost of travel, lodging and meals for the participants, if applicable.

vi) Salaries, plus employee benefits of the training function, allocated in some convenient way.

In addition, specific cost related to the needs assessment and evaluation should be included, if appropriate. The conservative approach is to include all of these costs so that the total is fully loaded.

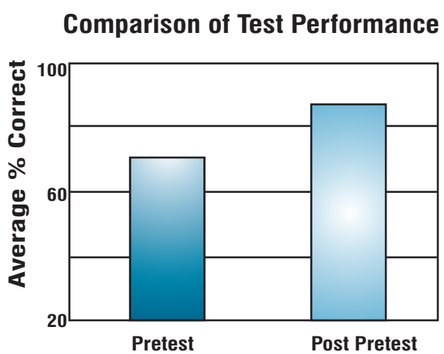


Figure 3

CONCLUSION

The Kirkpatrick model provides one technique for appraisal of the evidence for any reported training program and could be used to evaluate whether a training program is likely to meet the needs and requirements of both the organization implementing the training and the staff who will participate.

Training as a profession is deeply concerned about issues ofindividual and organizational learning, change and success, and how, through its professional roles and activities, it canbenefit people and organizations as they pursue various goals and interests. This intrinsic commitment means wehave a driving obligation to use training tools and processes—including the selection and use of evaluation models and frameworks—in a manner that is ethically thoughtful andsound. Although there have been a number of conceptualand methodological criticisms of Kirkpatrick's model, fewhave evaluated the model from an ethical perspective. Thegoal of this article is to reflect on the assumptions anduse of Kirkpatrick's model in an effort to respond to afundamental ethical question about training evaluations.

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