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Evaluating Return on Training and Development

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Abstract

Increasing global competition with a strive of organisation to achieve their goals of cost reduction, best performance and high yield etc has led the companies strategically manage their human resource. Training plays a significant role in achieving organizational objectives by keeping in view the interest of employees and organisation (**Stone J.R.human resource 2002**). Training and development means the employee to perform current or future job. The objective of this paper is to highlight the cost of human resources up gradation in the form of training and development and its related profit to the firm. This paper tries to find out the ways to calculate the return on investment of training and development.

Keywords: return on training, development

Introduction

For organizations to maintain competitive edge today, the economic volatility, increasing uncertainty, ubiquitous information, rapid technological changes, shrinking & increasingly diverse work force and globalization of markets have started to pose serious challenges to organizations to maintain competitive edge. To face and accept these challenges and to flourish is indeed a Herculean task. This intensifies the need for learning, training and development.

Since a long time, it is blindly assumed that training have positive returns in organizations. They train workers because they believe it strengthens the organization and serves as retention tool (**Lachnit 2001**). Though the focus of training & development has shifted from mere necessary expense to an important investment, yet training is not shown as assets instead it is shown as human capital investments in expenditure column of their corporate balance sheets. Training investment decisions are the result of intuition and casual estimates, so companies are left with no evidence to prove that positive returns are being realized on the investments.

No spending decision is approved by business managers without relevant justification in today's cut-throat competition and cost cutting age. HR department has to compulsorily justify their expenditure on training. If they fail to do so, penalty of budget cut is being implied. "By attempting to measure that value--by any means--we can't help but promote its existence" (**Goldwasser 2001, p. 90**).

For measuring training and performance, there are many references to Kirkpatrick's model which was first promoted by Donald Kirkpatrick in 1957, contains four types of evaluation conducted by training departments:

Level 1 Reaction measures the level of satisfaction of the participants. It also focuses on road ahead and what they are likely to use in real life. Attitude surveys, questionnaires, and debriefs are being used for the evaluation. However a favourable reaction does not ensure that participants have actually learned something new.

Level 2 Learning: What knowledge, skills, and attitudes did they learn during the program with the help of tests, simulation, role plays and other evaluation tools. These checks help to evaluation that participants have

learnt something in the training and how he plans to apply in his job. A favourable reaction does not ensure that participants have actually learned something new which was the same case at level-1

Level 3 Behaviour: Any changes from training visible in on-the-job performance? Performance data, observations, and surveys of ex-trainees and significant others are used to measure how well the training transferred to the job. This level measures the utilization of technology at the time of training of technology applications. To gauge the success of the application of training program, level 3 evaluations are important; still there is no guarantee of positive impact.

Level 4 Results: Talks about the organizational impact of the training? Performance and financial information are being used to estimate organizational results. This level measures output, quality, costs, time and customer satisfaction.

The effect of training on individual attitudes and performance are being evaluated at Levels One, Two, and Three. Level Four evaluation talks about the change in the organization as the result of training. As one move from Level One to Level Four, level becomes more difficult to conduct; however, the benefits increases.

This approach doesn't readily take into account the question of whether the training and development programme is worth the cost incurred in conducting the programme. In 1991, 5th level to the Kirkpatrick approach was added by Jack Phillips, called ROI or Return on Investment which introduced for the first time the need for an organisation to use mathematical and statistical techniques in determining costs and benefits of an HR intervention [Sachdeva, 2014].

Cost benefit analysis has therefore become a necessity. During planning, it helps to predict whether the benefits derived from an intervention such as training will be greater than or equal to the costs of the intervention. Cost-benefit analysis can help us to determine whether there was any real benefit if compared with the actual costs. The most common approach is to calculate **return on investment (ROI)** which is a complex process. The effectiveness of a training and development programme can be evaluated by ROI measurement by using the formula:

$$ROI = (Benefits - Cost) / Cost * 100 .$$

A financial estimate of both the benefits and the costs is produced to determine whether the benefits exceed the costs. In other words, how well training contributes to meeting organization's mission can be determined by using estimate of ROI along with cost-benefit analysis

Lachnit (2001) presents five steps for measuring ROI (pp. 53-54):

1. Obtain data to demonstrate the changes in behaviour, e.g., that gathered through surveys, questionnaires, on-the-job observations, post-program interviews, focus groups, performance monitoring.
2. Isolate the effect of training, e.g., through the use of control groups, trend lines, forecasting models.
3. Convert the data to monetary value by focusing on a unit of measure, determining a value for that unit, calculating the change in performance data, determining the annual amount for the change, and calculating the total value of the improvement.
4. Tabulate the program costs: this is the value of the cost of taking people away from their jobs for the training, including salary and benefits.
5. Calculate the return on investment by dividing the net benefits by the costs times 100 percent.

Objective of the study

The study has been conducted mainly to:

1. Understand the return on investment (ROI) of training & development.
2. To understand the challenges in implementing the process of ROI.
3. Return on investment and its impact on Business.

Review of literature

In 1991, Jack Phillips thus added this 5th level to the Kirkpatrick approach, called ROI or Return on Investment which introduced for the first time the need for an organisation to use mathematical and statistical techniques in determining costs and benefits of an HR intervention [Sachdeva, 2014]. In the absence of a comprehensive approach to calculate ROI in training and development activity, even big established organisations find a choice to be made a difficult decision when need to cut down on their training budget. This is attributable to their inefficiency to discover the training and development programmes which are working extremely well, are absolutely ineffective or ones which need to be revamped [Phillips, 2011]. For years, companies have been operating under the assumption that they are reaping positive benefits from their training efforts. They train workers because they believe it strengthens the organization and serves as a retention tool (Lachnit 2001). "Even a company like Xerox Corporation, which invests considerable monies in sales training, treads cautiously around claims of a dollars-and-cents return on investment" (Keenan 2000, p. 23). Due to this increased awareness, top executives are subsequently demanding the same accountability from their training and education functions. In some extremes, these functions are being asked to show the return on investment or face significant budget cuts (Gerber, 1994)

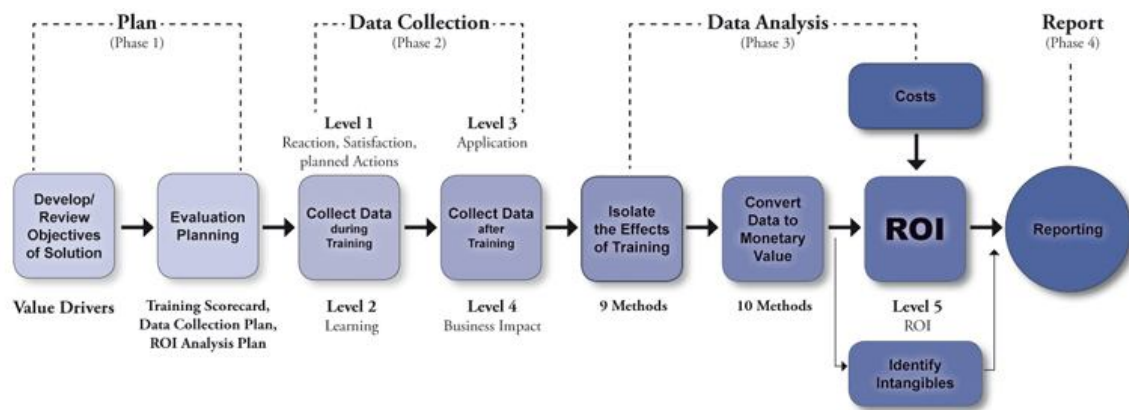
Research Methodology

The research paper is an attempt of exploratory research, based on the secondary data sourced from journals, magazines, articles and media reports. Looking into requirements of the objectives of the study the research design employed for the study is of descriptive type. Keeping in view of the set objectives, this research design was adopted to have greater accuracy and in depth analysis of the research study. Available secondary data was extensively used for the study. The investigator procures the required data through secondary survey method. Different news articles, Books and Web were used which were enumerated and recorded.

THE ROI APPROACH TO COST-BENEFIT ANALYSIS

The measure of monetary benefits obtained by an organisation over a specified time period in return for a given investment in a training programme is Return on investment (ROI). It is the extent to which the benefits (outputs) of training exceed the costs (inputs).

ROI calculation begins with the model shown in the given figure. This model provides a systematic approach to calculation of ROI and shows that the process flows from one to other systematically and logically. The ROI Process is the standard in evaluation for HRD initiatives



ROI PROCESS MODEL

http://www.ROI-institut.com/english/_Evaluation-Bildungscontrolling/roi-process.asp

Planning the evaluation

The ROI process starts with the most important and cost-savings step-planning the evaluation. During the initial stages of the planning process, four specific elements-evaluation purposes, instruments, level and timing are considered.

Evaluation purposes will often cover the scope of the evaluation, the types of instruments used, and the type of data collected.

The appropriate instruments to be used to collect data are determined in the early stages of developing the ROI. Questionnaires, interviews, and focus groups are common instruments.

Training programs are evaluated at five different levels. Collection of data takes place at Levels 1, 2, 3, and 4, if an ROI analysis is planned.

A final element is the timing of the data collection. This depends on the type of programs. In some cases, pre-program measurements are used to compare with post-program measures. Multiple measures are taken at different times throughout the process in some programs. In other situations, specific follow-ups are taken after the program where pre-program measures might not be unavailable. The important issue is to determine the timing for the follow-up evaluation.

The data collection plan and ROI analysis plan are developed after this preliminary information is gathered.

The data collection plan:

Broad objectives of the plan to be defined, more specific objectives are to be defined/developed later.

Previously used metrics, values or methodologies used by the client are to be identified and their suitability for the current exercise to be determined.

Appropriate evaluation methods to be selected

Identify the audiences who will be surveyed for data :The participants,The manager /team leader,The analyst and Company records

The timing for the data collection is noted

Pre-training data collection (benchmarking the current situation) .

Post-training data collection (comparative analysis).

Immediately post-training (initial reaction and assessment) focused on levels 1 and 2 .

At a later date -during the learner's job performance.

Responsibilities for data collection and analysis is allocated.

The ROI Analysis Plan : This is a continuation of the Data Collection Plan, capturing information on the key items needed to develop the actual ROI calculation.

List Significant Data items (usually Level 4 or 3) to be collected :Benefit Factorsa and Cost Factors .

Methods to isolate effects of the learning/training from other influences ,methods to convert data to numerical values , intangible benefits ,other influences ,communication targets, other issues/events that might influence program implementation.

Collecting Data: After the planning process, implementation begins. Although the ROI analysis is (or should be) planned early in the training and development cycle, the actual ROI calculation begins with data collection. Data collection is the most important step of the ROI process. Hard data, representing output, quality, costs, and time; and soft data, including work habits, work climate, and attitudes, are collected. Data are usually collected during two time frames. During the training process, Level 1 and Level 2 data are collected. Following the training, Level 3 and Level 4 data are collected. A variety of methods are used to collect the post-program data to be used in the ROI evaluation.**(The Return on Investment (ROI) Process Issues and Trends- Jack J Phillips and Patricia Pulliam Philips)**

Follow-up surveys are used to determine the participant's level of utilization of various aspects of the program. Survey responses usually represent attitudinal data. They are useful in collecting Level 3 data.

Follow-up questionnaires are administered to uncover specific applications of education and training. Participants provide responses to a variety of open-ended and forced response questions. Questionnaires can be used to capture both Level 3 and 4 data.

On-the-job observation - actual skill application and use are captured. On the job observation are useful in customer-service training. The Observer has to be either invisible or transparent for this method to be effective. Observations are appropriate for Level 3 data.

Post-program interviews - The extent to which learning has been utilized on-the-job is determined by conducting interviews with the participants. Specific applications are uncovered for probe through interviews. Observations are appropriate for Level 3 data.

Focus groups: The degree to which the group of participants has applied the training to job situations is determined. Focus groups are appropriate with Level 3 data.

Program assignments: The assignment is completed on the job with the help of skills or knowledge learned in the program by the participants. This method is useful for simple short-term projects Completed assignments can often contain both Level 3 and 4 data.

Action plans: These are developed during programs and are implemented on the job after the program is completed. Success of programs can be determined by follow-up of the plans. Level 3 and 4 data can be collected with action plans.

Performance contracts: These are developed when agreement on specific outcomes from training among the participant, the participant's supervisor, and the instructor is agreed upon. Performance contracts are appropriate for both Level 3 and 4 data.

Performance monitoring: It is used where various performance records and operational data are examined for improvement. This method is particularly useful for Level 4 data.

Selection of the data collection methods appropriate for the setting and the specific program, within the time and budget constraints of the organization is the most important challenge.

Isolating the effects of the program: After the completion of training program, identifying the performance improvements that has resulted from the training, and improvements that are co-incidental and may not be directly relevant to the training is of prime importance. The following techniques have been utilized by organizations to address this important issue (**Phillips, 1996a**):

A **control group** arrangement may be used to isolate impact. With this technique, one group participates in the program while another, similar, group does not. Change in performance of a group which has undertaken training is compared to the performance change of a similar, untrained group. The control group arrangement is the most effective way to isolate the effects of education and training if implemented properly.

Trend lines how the trends in performance change in the absence of training program. After the program, the projection is compared to the actual data and the estimate of the impact is represented by the difference. This strategy can be an accurate way to isolate the impact of education and training under certain conditions

A **forecasting model** is used to isolate the effects of a program when input and output variables' mathematical relationships are known. With this approach, assuming that the program is not conducted, forecasting model is used to predict the output variable. After the program, the actual performance of the variable is then compared with the forecasted value to estimate the impact of education and training. This may be appropriate where there are several factors to consider in the change in performance (e.g.an increase in marketing expenditure and sales increase due to training)

Participants estimate the amount of improvement related to education and training. Total amount of improvement is provided to participants on a pre-and post-program basis, and they have to indicate the percent of the improvement that is actually related to the program.

Supervisors of participants estimate the amount of improvement related to education and training. Total amount of improvement is provided to supervisors on a pre-and post-program basis, and they have to indicate the percent of the improvement that is actually related to the program.

Senior managers estimate the impact of education and training. In these cases, an estimate or “adjustment” is provided by managers to reflect the portion of the improvement related to the program. Despite of being inaccurate, senior management ownership of the program are some advantages of having senior management involved in this process.

Experts provide estimates of the impact of education and training on the performance variable. The experts must be familiar with the type of training and the specific situation as the estimates are based on previous experience.

Inputs are provided by customers to the extent to which training has influenced their decision to use a product or service in some situations. With limited applications, it can be quite useful in customer service and sales training.

Convert data to monetary value: In this stage it is important that the financial value of the various changes that resulted from the training is estimated and the total costs incurred in implementing the training program is identified. In simpler terms, data at level 4 is converted to monetary values to compare to program costs. Various approaches are available to convert data to monetary values. Specific technique selected usually depends on the

type of data and the situation (**Phillips, 1996b**): Output data converted to profit contribution or cost savings ,direct costs saved ,increased volumes of output produced and timeliness of output .

Cost of quality calculated and quality improvements converted to cost savings or increased profitability.

Cost savings (salaries and overheads) due to reductions in participants' time in completing projects.

The values of the performance improvements gained can be estimated by internal or external experts

The cost savings or value of increased productivity can be estimated by participants or their supervisors/managers.

External databases are sometimes available to estimate the value or cost of data items. For example- Research, government, and industry databases etc.

Soft measures are linked, mathematically, to other measures that are easier to measure and value. This approach is particularly helpful when establishing values for measures like intangible attributes -customer satisfaction, employee satisfaction, grievances, and employee complaints that are very difficult to convert to monetary values. This is a challenging process, particularly with soft data, but can be methodically accomplished using one or more of the above techniques.

Tabulating Program Costs:The next step in the process is tabulating the costs of the program. Tabulating the costs involves monitoring or developing all of the related costs of the program targeted for the ROI calculation. Among the cost components that should be included are: Cost towards external training services purchased, the cost to design and develop the program, possibly prorated over the expected life of the program ,the cost of all program materials provided to each participant, the cost of the instructor/facilitator, including preparation times as well as delivery time,the cost of the facilities for the program/internal training staff involvement, travel, lodging, and meal cost for the participants, if applicable,salaries plus employee benefits of the participants for the time they attend the program, administrative and overhead costs of the education and training function allocated in some convenient way to the training program ,and the costs of carrying out the ROI on the training program.

After calculation of the direct financial value of the performance enhancements, it is also necessary, wherever possible, to estimate the value of the more "intangible benefits", such as: Increased job satisfaction,benefits of increased staff retention and reduced recruitment costs ,increased organisational commitment , improved teamwork ,improved customer service, reduced problems and complaints ,reduced conflict

Calculating the ROI:

ROI can be expressed in 4 different ways:

1. Benefit/Cost Ratio (BCR):The return on investment is calculated using the program benefits and costs. The cost/benefit ratio is the program benefits divided by cost. In formula form it is:

$$BCR = \frac{\text{Program Benefits}}{\text{Program Costs}}$$

2. ROI % :The return on investment uses the net benefits divided by program costs. The net benefits are the program benefits minus the costs. In formula form, the ROI becomes:

$$ROI(\%) = \frac{\text{Net Program Benefits}}{\text{Program Costs}} \times 100$$

3. Break-even time:

$$\text{Break-even time Break-even time in months} = \frac{\text{Investment}}{\text{Benefits}} \times \text{Months}$$

4. **Pay Back Period:** Another measure of calculating return on investment is names as Pay Back period. It calculates the period in which the total cost incurred will be recovered by the monetary benefits.

$$\text{Pay Back Period} = \frac{\text{Total Investments}}{\text{Annual Savings}}$$

Barriers to ROI Implementation

Significant progress has been made in the implementation of ROI, still implementation of the concept is inhibited by the significant barriers where some are real and others are just the myths which are based on false perceptions. Some barriers are briefly described below:

Costs and Time Consuming: It is perceived that the time and cost of doing cost-benefit evaluation and calculating ROI are excessive as it adds additional costs and time to the evaluation process of programs. In reality, it is being observed that the added amount is not excessive. 3% - 5% to the overall training budget is required for a comprehensive ROI process. If used properly they result in savings of time and money and helps in the elimination of unproductive or unprofitable programs.

Lack of Skills and Orientation for HRD Staff: ROI implementation is considered as complicated process and they lack the basic skills necessary to apply the process within their scope of responsibilities. Also, the focus of typical learning program is more on the learning process not on results. Consequently, orientation, attitude, and skills of the HRD staff are tremendous barrier to implementation. This is challenging level of evaluation. After conducting a few evaluations in organizations, they can be used as models.

Faulty Needs Assessment. An adequate needs assessment s not being done for many programs. Due to management request or to follow a popular trend, some programs take place due to wrong reasons. The benefits from such programs are minimal. Negative value will be outcome of an unnecessary program. This is a realistic barrier for many programs.

Fear: Fear of failure or fear of the unknown is reasons for not pursuing ROI by some organizations. Designers, developers, facilitators, and program owners maybe concerned about the consequence of negative ROI. ROI- a process improvement tool is considered as a performance evaluation tool- their greatest fear. Also, traditional fear of change will be stirred by the ROI process. Based on unrealistic assumptions and a lack of knowledge of the process, is a realistic barrier to many ROI process.

Discipline and Planning. To keep the process of a successful ROI implementation on track, proper planning and a disciplined approach is required. Implementation schedules, evaluation targets, ROI analysis plans, measurement and evaluation policies, and follow-up schedules are required. Enough discipline and determination is required by team to stay on course. If there is no immediate pressure and senior management doesn't require ROI, it becomes barrier as the team may not allocate planning and coordination time. ROI implementation at most of the times might not be treated as priority.

Difficult to separate training's effect on organizational results from other factors: It is difficult to separate effect of training on organizational results from other factors. For example, aircraft inspections time reduction may be due to revised inspection procedures and not due to newly-introduced training package. Accordingly, non-training effects are to be eliminated for fairer results.

Benefits of ROI: Several distinct and important benefits can be realized besides the obvious methods of implementing ROI process.

Measure Contribution: It shows the impact of training in a most accurate and credible way. The specific contribution from a select number of programs can be known. Whether the benefits of the program have outweighed cost can be determined by the ROI study.

Establish Priorities: High impact learning organization can be created by finding out which programs contribute the most to the organization through calculating ROI in different areas.

Successful programs can be expanded into other areas. Re-designing and redeployment of inefficient programs can be done. Ineffective programs may be discontinued.

Focus on Results. It is a results-based process where instructional designers, facilitators, participants, and support groups focus on measurable objectives with all programs. Thus, the effectiveness of all learning and development programs gets improved by this process

Earn Respect of Senior Executives and Sponsor. Respect can be earned by the senior management team and the sponsor (the person who really cares about the program) for implementing ROI process. Efforts are being appreciated to link training to business impact and get the actual monetary value. Their decisions become much easier.

Alter Management Perceptions of Learning and Development: The management group can be convinced that learning is an investment and not an expense if ROI Methodology, is applied consistently and comprehensively. To build a partnership with management, L&D should be seen as making a viable contribution to their objectives, thus increasing the respect for the function.

Conclusion

If a company is to survive, expenses should not exceed income at any point of time. Justification for any expenditure on the balance sheet in today's economy is must irrespective of the size of a company. However, there are many ways to compare returns on investment. The cost/benefit analysis is one means of evaluating training returns because it provides evidence of bottom-line profits. ROI calculations are being developed by hundreds of organizations to meet the demands of influential stakeholders. It shows the value added contribution of education and training. If training evaluation is done to ensure a correlation between specific outcome and training, this high level of ROI evaluation is required. But if the reason is to improve soft skills then other methods such as surveys, interviews may be used to support training. Literature review reveals that investment in training leads to positive returns. Returns may vary from organizations to organizations due to other factors effecting the situation.

This paper demonstrates that ROI poses significant challenges and provide several benefits to the organization. While there are many who understands the importance of ROI process, some question its appropriateness, accuracy, and necessity. To avoid such negativity, the process must be based on a sound framework. A process model should be used that provides step-by-step procedures and credible methodologies. Reliable and accurate ROI calculations can be developed through careful planning, methodical procedures, and logical and practical analysis. The approaches, strategies, and techniques are not overly complex and can be useful in a variety of settings. Practitioners and researchers combined and persistent efforts will continue to refine the techniques and create successful applications

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