Training Evaluation Models: an Analysis

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ABSTRACT

Training is an intervention to bring in a change in an employee's performance. Interventions are investments and all the HR Managers have to prove its worth in order to ensure they justify the need for such interventions and its effectiveness. Hence the evaluation of the training for understanding its effectiveness becomes a prerequisite for any such effort. This paper shall focus on the various Evaluation of Training Models suggested by scholars and shall highlight the most widely used ones. This paper is descriptive in nature and is a general review of conceptual framework of the various models.

Introduction

Training in organisations is an activity which requires time, money & energy. Most of the HRD Managers are trying to keep pace with the changing trends in the operations and keep the staff abreast and skilled as per the changes. The HRD is accountable for all the interventions. All interventions are investments. Thus HRD professionals main concern is the result based training and to evaluate the ROI of the training. Hence the Evaluation of Training becomes a very important stage in the entire cycle of Systematic Approach to training. As per the Systematic Approach to Training, the first stage is to find out the need for training, followed by designing the right content with actionable objectives to achieve the desires results. The third stage is where the actual training is conducted and the there is transfer of learning form the facilitator to the trainees. The final stage being the assessment of the effectiveness of the training intervention. The worth of the training programme is evaluated because of:

- *To understand the cost of the efforts and its contribution in achieving the organisational objectives.
- Enables to decide the work of the training and reasons for the continuation of the programme.
- Acts as a feedback system for further development of the training programme.

*Evaluating Training Programs by Donald L. Kirkpatrick and James D. Kirkpatrick, Third Edition, Published by TATA McGRAW-HILL Edition

The uses of the training evaluation can be put into the following ten uses and purposes:

*1.To have an understanding of how successful is the programme in achieving its set objectives.

2. To find out the areas for improvement as well as understand the strengths.

3. Comparison of the costs incurred to the benefits.

4. To record the probable entry behaviour of the participants for the next programme. .

5. To check the usefulness of the varied methodologies used.

6. To identify which participants were the most successful with the program.

7. To identify points for reinforcement.

8. To gather data for future planning.

9. To determine the effectiveness of the programme.

10. To compile data for facilitating better decisions.

2. Review of Literature

Harshit Topno has done an analysis of the Evaluation of Training and Development (2012). He has analysed four Evaluation models that is 1) Kirkpatrick's four level Model, 2) CIPP

Evaluation Model by Daniel L. Stufflebeam, 3) CIRO Approach, by Peter Warr, 4) Phlilips 5 levels ROI Model. He concluded stating that there are many models for the evaluation of training, out which Kirkpatrick's four level model is the most widely used one. He also stated that each model should be expanded by giving its main indicators and each indicator should be explained properly so that the evaluation parameters are drawn and are well defined. This shall make the task of evaluation more systematic and thorough.

Varsha Srivastava et al. in their study of Analysis of Various Training Evaluation Models stated that there are many models available to choose from, but all them require more focus on modifying it, so it can be easily carried out with effective outcomes. They have studied and analysed five Models, Kirkptricks Four level, CIPP, Phillips Five level model, CIRO model and Kaufman's five level model.

Akhila Kunche et al in their study of Analysis and Evaluation of Training Effectiveness (2011), has mentioned New Model called the Backward Planning.

*Handbook of Training Evaluation and Measurements Methods by Jack J. Philips, First Edition, Published by Jaico Publishing House.

Level 4

Result

⇩

Level 3

Performance

⇩

Level 2

Learning

⇩

Level 1

Reaction
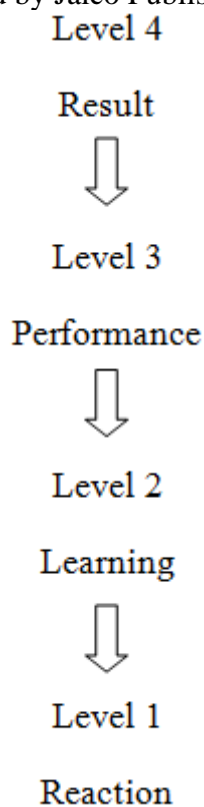
The Backwards Planning Model

The above model works backwards, with identifying the desired outcomes, for which the required level of performance is understood and the same is matched with the level of learning to be given in terms of Knowledge and Skill. Backward planning can also be effectively used for the evaluation of training, keeping the outcomes anticipated and thus going backwards to the stitching of the training content.

Tripathi J.P. et al in their work titled "A literature Review on Various Models for Evaluating Training Programs" (2017) states that there are various models for evaluation of training that are available, but among these the most widely used is the Kirkpatrick four Level Model. Evaluation of training cannot be ignored by organisations. Models can be modified and optimally used to make the interventions more effective.

Jonathan Deller in his article "Training Evaluation Models: The complete Guide" (2020), discussed and analysed various models, like The Kirkpatrick's Four Level Model, The CIRO Model, The Phillips ROI Model, The Brinkerhoff Model, Kaufman's Model, & Anderson Model. He summarised that among all the Kirkpatrick's model is the widely used model and it has formed the base for the rest of the models. After the Four levels model, the CIRO Model is more practical and it is being preferred by many organisations. The Phillips ROI Model has been favoured by all those organisations who tagged monetary value to the results of the evaluation. It is an extension of the four levels model with a fifth level being added, which is the ROI level. But very few organisations are able to reach till the fifth level. SCM or the Brinkerhoff Model is a simpler model and cheaper compared to Kirkpatrick's and it can be applied to a great many situations. Kaufman's model is praised for its simplicity as the 'input' and 'process 'are separated making assessments easier. However the last Level of the Model, the Societal/customer consequence is mostly not possible to be used for many business entities. He concluded stating that there are many models for training evaluation, each having their own advantages and disadvantages. Each of these models need not be implemented fully; they can be modified and applied as per the requirements. If carefully considered then only an organisation can get the best results from the chosen model.

Lukman Ruskanda et al, in their work titled, "Implementation of the Kirkpatrick Model

Training Program Evaluation" (2018), aimed to determine the effectiveness of the implementation of Education and Training Medical Examiner Officer Hajj. It can be concluded that the researcher has used the Kirkpatrick's four level model to evaluate the training of the Medical Examiner, effectively.

Punia B.K. et al, in their study titled 'A Review of factors Affecting training Effectiveness Vis a Vis Managerial Implications and Future Research Directions'(2013), mentioned two more models for evaluation that is Noes Model and Swanson & Sllezers Model. They concluded stating that there are many factors which influence the training effectiveness. The training can be very effective if the trainees are motivated and their attitude also decides their learning from the training. Also managers should allow the trainees to practice the skills learnt in the training intervention.

Saha Jhumpa in her study "Comparative Study of Training Effectiveness Measurement Models" (2017), compared the Kirkpatrick's Model with Kaufman's Five level Model. Kaufman's Model is referred to as p Kirkpatrick plus model, which is just a modification of the Kirkpatrick's frame work. The level 5 of Kaufman's is societal contributions, which he considered as mega analysis, which moves evaluation beyond organisations. The comparison between CIRO and Kirkpatrick is that the former emphasises on measurements taken pre and post training.

In the paper titled 'Easy, economic, Expedient-An effective training evaluation model for SMEs", Khan Sajid et al, proposed a new frame work for evaluation for assessing SMEs training effectiveness. The proposed model is 3 levels model, as depicted in the figure below.
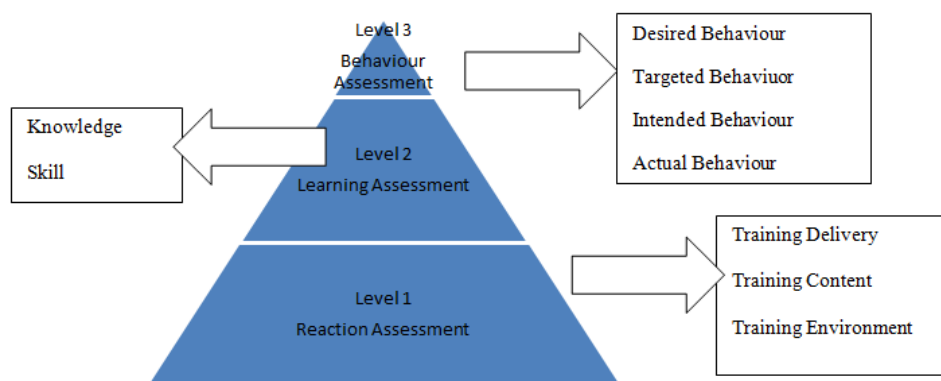

Figure: 2 Proposed Evaluation Model along with Assessment Dimensions

In the paper: Are we doing the Right Thing? Food for thought on Training Evaluation and its context,(2008) the researchers Giangreco Antonio et al, discussed that while researching a training evaluation thought to be given to the context of the purpose of evaluation. They proposed four elements that should be considered while framing the evaluation model or the processes. While framing the evaluation model or the process of implementation focus should be given to the design of training incorporating the trainees profile, the content of the delivery, the size of the organisation and the legal framework.

Models for Training Evaluation

1. Kirkpatrick's Four Level Model 1967

The first evaluation model was suggested by Donald Kirkpatrick (1959-60) in his papers in published by American Society for Training &

Development. Kirkpatrick's model of evaluation has four levels.

Level 1

Reaction: in this level the reactions of the trainees are noted. It is a feedback of the trainees about the entire training experience of the training, the content, the methodologies, the infrastructure, the aids used, and the trainer's expertise. These are usually taken at the end of the training in the form of questionnaires most popularly known as smilee sheets or Immediate Reaction Questionnaire.

Level 2

Learning: What level of knowledge or skills have the trainees acquired is measured at this level. This is done in the form of formative and summative assessments. In the design phase the assessments should be designed to ensure there is a check to understand the learning.

Level 3

Behaviour: This level is to check the implementation of the new sets of knowledge & skills acquired. The trainee undergoes training for the up gradation of knowledge or skills up scaling the performance. This is usually carried out through observations, appraisals & HR audits.

Level 4

Results: In this level the impact of the training on the training objectives is assessed and its application to the desired results.

2. Phillips ROI Model 1996

JJ Phillips in the year 1996 added another level to the Kirkpatrick's four levels of evaluation, which is ROI (Return on Investment). Phillip suggested that there ought to be focus on evaluating the monetary benefits. Almost all training models speak of measuring satisfaction; only Phillips model suggests monetary aspects, though very few organisations conduct evaluation at the ROI level.

3. Brinkerhoff SCM Model 2003

A very new method of evaluation was introduced by Robert O. Brinkerhoff in 2003 called the Success Case Model (SCM). This gives an understanding which helps an organisation to assess how well the training has worked or why it has failed to work. The SCM is different than other models majorly in two ways, which are:

1. This model is not limited only to evaluation of training but can be applied to many more activities.
2. Unlike other models evaluation is not done on all participants. It considers only those who most successfully complete and those who have least successfully completed. It considers extreme cases only.

The different steps that an organisation should use for assessing the effectiveness of training are:

1. Planning a case study.
2. Frame an impact model that defines success.
3. Identification of best cases and the worst cases scenarios.
4. Documentation of the effective cases and accordingly, take feedback.
5. Formulate conclusions; take necessary steps for recommendations and communication of the results to the stake holders.

4. Anderson Model of Learning Evaluation

Anderson Model of Learning Evaluation 2006 was first published by the Chartered Institute of Personnel and Development, as the 'Anderson's Value of Learning Model'. This model primarily focuses on aligning the training programme with its priorities and accordingly bring in the changes to match the organisational goals. The model is three stages, which is as follows:

1. To align the training as per the strategic priorities.
2. Select and use different methods to assess the contribution of learning.
3. Determine the most useful approaches for the organisation.

5. CIPP Evaluation Model, Stufflebeam's 1996

In the CIPP model C represents Context, I the input, P for Process and P for Product. CIPP model was suggested by Daniel Stufflebeam et al in 1960s.This was suggested with an idea of linking training evaluation with decision –making. It has the following approaches.

Context Evaluation: This is to determine the extent to which the objective of the training matches with the organisational needs.

Input Evaluation: is to determine the extent to which the training session strategies, procedures and the activities support the objectives identified in the context evaluation level.

Process Evaluation: This is the action plans to evaluate the preparation of the immediate reactions sheets, assessment scales, and the data analysis of all information gathered. The plan is to monitor the program systematically.

Product Evaluation: This involves the analysis of the attainment of the training objectives. It is to understand the attainment of the short term and the long term goals.

6. Warr et al's CIRO Approach, 1970

CIRO stands for **Contex**t, **Input**, **Reaction** and O for **Output**. Context means the environment in which the training took place, I- Input means the entire training cycle, R – Reactions towards the training and O- Outcomes of the training. CIRO model is also a systematic approach to training. Context takes care of the understanding and framing of the objectives, Inputs is to design the training matching the objectives, reactions will evaluate the participants' reaction towards the training and the outcome is the expected final result matching the objectives set at the context stage. CIRO Model focuses on both the aspects ie. before the training and after the training evaluation.

7. Kaufman's five level evaluation model 1995

Kaufman's five level evaluation model suggested by Kaufman, Keller and Watkins in the year 1995 and it connects performance to expectations. This model evaluates the impact of the audience. This model is close to Kirkpatrick's Model with some changes and modifications. The five levels are:

1. Kaufman's first level is **Reaction** level, which for the convenience has been divided into two levels, 1a and 1b.

1a) **Input**: In this level the focus is on the quality of the resources being used and its suitability.

1b): **Process:** in this level Kaufman suggested the level focusing on how efficiently the training has been delivered and the satisfaction level of the trainees.

2. **Acquisition**: at this level the evaluation is done to understand the extent to which the trainees have acquired the training inputs. It is focused on the mastery of the trainees.

3. **Application**: in this level the impact is assessed. It is to understand to what extent the trainees are using the acquired inputs in the job situation.

4. **Organisational Payoffs**: in this level the evaluation is to check the organisational benefits due to the training. At this level the overall performance and the ROI is evaluated.

5. **Societal Contributions**: It is to understand the level of impact of the training on organisational customers and society at large.

8. Viramani and Premila's Model of Evaluation.

Virmani and Premila have suggested a three level training evaluation model. According to the researcher the evaluation of training should be an integral part of the objectives and should be thought of during the designing of the training. It cannot be done after the training is completed.

Virmani et al suggested three levels of evaluation, which are:

1. The first level is the Pre training evaluation where the objectives set should be evaluated keeping in the mind the organizational goals. Focus should be to achieve maximum outcome.

2. The second level being the evaluation during the training programme which is to evaluate the content and the delivery of the training inputs. It validates the content of the training programme.

3. The third level is the Post training evaluation which should be done again in sub levels:

   a. Reaction Evaluation, which is to evaluate the how, satisfied the trainees are with training, to be done during the training or immediately after the training.

   b. Evaluation of the learning to be undertaken to understand the level of learning has taken place. This can be done preparing the learning index with the support of the pre and post training scores.

   c. The third level being the Job Improvement Plan is to evaluate the extent of learning.

   d. Next level is the on the job evaluation which helps in assessing the quantum of learning being transferred to the job situation. It helps in understanding the impact of training and whether the performance gap has been filled up.

   e. Follow –up Evaluation: It may be the trainee is unable to bring in a change in his performance immediately in his work place, so the performance has to be monitored at least for six months to evaluate the input of training.

9. Bramley's Model of Evaluation

Bramley suggested a new three level model and focused on ensuring the effectiveness of training programme through evaluation. The different levels are:

1. **Pre Training Evaluation**: The author emphasized that the evaluation should be done at the pre-training stage to understand whether the training is a necessity, if so then how the new skill and knowledge acquired can be matched with the organizational goals, the level of changes to be made by the supervisor to support the trainers performance.

2. **Evaluation during the event**: Evaluation during the training can help in improving the training programme allowing

midcourse corrective measures. It makes the objectives more clear and thus facilitate focusing on them.

3. **Evaluation after the event**: Bramley suggests this can be done at three different levels: which are the **Organization, Team** and **Individual levels**.

The change in behavior of the trainee can be measured and evaluated. This can be done through supervision, monitoring and observation by the supervisors and the subordinates. The change in the level of learning can be done pre and post training tests.

10. David Reay's Model of Evaluation

Reay's Model as suggested is of three stages:

1. **Trial Phase:** This is the phase where the programme is developed, which is divided into two parts:

- **Developmental phase**: This is initial testing without any complete evaluation.
- **Pilot Testing**: This is done to understand if the designed program shall suit to fill the performance gap and help in improving bahaviour at the job situation.

2. **Ongoing Phase:** At this level of evaluation, the requirements of the training are tested at a holistic level, which is divided into two parts.

    - **Validation**: The design of training is evaluated in order to establish the effectiveness and outcomes expected.
    - **Formative Evaluation**: Reay suggested that evaluation should be a continuous process in order to take necessary measures whenever the situation requires.

3. **Final Phase:** In this phase the final evaluation is done to determine that the programme conducted was effective and the objective of the training have been achieved.

11. Hamblin Training Model

Hamblin defined training evaluation as "*Any attempt to obtain information (feedback) on the effects of a training program and to assess the value of the training in the light of that information.*" (Rae, 2002).

Hamblin suggested five levels of Evaluation Model (Rae, 2002).

The first two levels of evaluation are same as suggested by Kirkpatrick where the reactions and the learning's of the trainees are assessed.

3 **Job Behavior: is e**valuating the change in job behavior which is the result of training.

4 At the **Functioning** level the effect of the training on the overall organizational goals is assessed.

5 **Ultimate Value:** At this level it is evaluated to determine the extent it has helped in the profitability or the survival of the organization.

12. Bushnell, Davids. Evaluation Model

The Input- Process-Output (IPO) approach to training evaluation is found to be an effective model by IBM to evaluate a training programme. By using the IPO model one can determine whether the programme is achieving its purposes or not.

IPO as suggested by Bushnell includes setting of the evaluation objectives, designing and implementation of the evaluation and selecting the right measurement tools.

Conclusion

This study is an analytical study referring to many training evaluation models. There are many more models suggested by scholars, but even then there is a wide scope for research scholars to carry forward the study in this area. Kirkpatrick's Evaluation model is the most widely used model, but even in this model, most of the organisations are not evaluating all four levels, as some of the reasons as cited below:

- Managers are not aware of all the levels.
- To evaluate all the levels it takes time.
- Organisations are not very keen to evaluate, maximum evaluation is done at the Reaction and Learning levels only.

The writer of this research article suggests different models for different training programmes. For training programme comprising of Induction & Orientation, the reaction and Learning level is sufficient as there is expected change in behaviour, as the trainees are freshly inducted staff. For training programmes giving inputs on using new technological changes need not evaluate the ROI level as the technology introduced is definitely for better processes aiming more efficient business. Likewise different

models would suit different type of industry too. In the service industry when training is imparted, it is usually for better processes for efficient performance. Service industry being all about customer relations and prompt service, the evaluation at the ROI level would be very difficult to assess as each effort done results in business sale. Similarly in a manufacturing unit, training will enhance production, but it's the sales team responsible for the business volume, so again the result level or the ROI may not work. In short it can be concluded to choose the appropriate model which suits the given training programme for the respective industry. This will ensure effective evaluation of training ensuring that all level suggested can be carried out. Lastly it has to be emphasised that Evaluation of Training is a pre requisite for all the training programmes to be implemented successfully.

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