Measuring the Effectiveness of the Training Programs Using the Kirk Patrick Training Evaluation Model

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Comments by the Faculty

The student has worked in the important area of measuring the effectiveness of training program of employees engaged in a large construction equipment company in India. Specifically, the application of the Kirk Patrick Training evaluation Model was carried out in the study.

The study has thrown light on important issues of the variable nature of the effect of training effectiveness among employees at various levels in the organization. The student after coming back from the organization in his discussions demonstrated the ability to explain the various concepts with regard to the model applied.

He got exposure in terms of gaining understanding of the organizational culture and climate, planning process and communication patterns, as well as got an opportunity to get exposure to HRM functions in general within the organization.

He was also able to make certain recommendations to the company for improving their training process so that the employees gained more from the same.

This kind of an exercise creates value addition for organizations, as they are able to have a re-look at their existing policies and procedures. It allows them to refresh some of their own world views based on the findings of students who are well-versed with some of the contemporary concepts learnt by them ,while they engage in classroom learning in their respective B schools. From the students' point of view it is a great value and addition and exposure, since it allows them to experience issues and concerns in a given field of management in real world situations making their learning more holistic, while preparing them to face their future workplaces in a more realistic manner.

Nilanjan Sengupta

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Industry Introduction

Heavy construction equipment are used directly and extensively in capital-intensive projects. Hence, trends in fixed investment are extremely salient determinants of demand for such products. The continuous increasing demand of new infrastructure enhances the demand for construction machinery across the globe. The construction equipment industry has grown at respectable-to-healthy rates, especially in growing economies. Some of the major players operating within the global market arena include, Caterpillar, Terex, Komatsu Ltd., CNH, and John Deere. The country's construction equipment, now estimated to be about Rs 22,000 crores, had been growing at a compounded annual growth rate of over 30 per cent during the infrastructure boom phase i.e. during 2003-2008. However, thereafter, the growth of construction equipment industry has been sluggish, almost remaining flat.

Company Introduction

ABC Construction Machinery Co. Ltd* is the Leader in Construction Equipment in India. It enhances the operational performance of its customers, leading to improving their profitability and competitiveness by offering constructive solutions. The company offers the largest range of Hydraulic excavators under a single brand in India

Major Competitors

- JCB
- L&T- KOMATSU
- Hyundai
- Volvo
- Kobelco
- TATA Hitachi

Objectives of the Project The objective of the project is to do a comprehensive study of various training programs provided by ABC Ltd. to its employees across various departments, and, to find out the actual utility of training given to the employees at work place and finally measure the effectiveness of those programs with the help of Kirk Patrick Model of training evaluation. Kirk Patrick Model for training evaluation is one of the most standard method for evaluating training effectiveness.

Deliverables of the Project: The study was conducted to understand the effectiveness of the training programs provided by ABC Ltd. The aim was to check whether the participants who undergo various training programs are able to convert their knowledge into learning. The project should clearly depict the extent to which the participant exercises his learnings from the training programs.

* (The name of the company has been changed for the sake of maintaining confidentiality)

Kirk Patrick Model of Training Evaluation

Donald Kirkpatrick has developed a very popular evaluation model that has been used since the late 1950s by the training community. The focus is on measuring four kinds of outcomes that should result from a highly effective training program. Many practitioners believe that as you proceed through each of the levels, the evaluation becomes more difficult and requires more time.

The four levels of Kirkpatrick's evaluation model are as follows:

1. Reaction - what participants thought and felt about the training.

2. Learning - the resulting increase in knowledge and/or skills, and change in attitudes. This evaluation occurs during the training in the form of either a knowledge demonstration or test.

3. Behavior - transfer of knowledge, skills, and/or attitudes from classroom to the job (change in job behavior due to training program). This evaluation occurs 3–6 months post training, while the trainee is performing the job. Evaluation usually occurs through observation.

4. Results - the final results that occurred because of attendance and participation in a training program (can be monetary, performance-based, etc.)

Methodology

Level 1

Reaction: *Immediate feedback is taken from the participants just after the training program.*

This was the first step of the process under which, the company provided each participant with the feedback sheet which they need to fill it up at the end of the training session. These sheets are collected and a 'master' sheet-summary sheet is created. These sheets are fed into MS Excel sheet and are further analyzed for identifying those parameters which lead to the effectiveness of programs or its failure.

This helped the company to know whether the training program made an impact on the participant or not.

Level 2

Learning- *Learning outcomes can include changes in knowledge, skills or attitudes.*

In this stage, the participant had to undergo a test *(generally known as pre-test)* and the scores were recorded in order to measure his learning before the training was provided to him/her. The scores were recorded and were kept for assessing the post training performance. After the training was delivered, the participant again had to write a test *(post-test)* in which he/she tried to apply what was learnt in the programme. The scores were then compared and analysis was done so as to know the shift in the level of learning of the participant as a result of the training that was received.

Level 3

Here the goal was to find out if training program participants changed their on-the-job-behavior (OJB) as a result of their having attended and participated in the training program. There is a feedback form designed by the company for both the participant and their supervisors to know the degree of increase in their skills and potential after going through the training program.

The training attendance sheet was provided to the researcher (student) by the company containing the record of the participants who attended various training programs in ABC's plant. The data was segregated on the basis of various parameters: **Ticket No., Name of the employee, Place, Training programme, Duration of the training.** The questionnaire was provided to the researcher by the company. The data was then mail merged and the survey sheets were made for all the employees for the number of trainings they attended.

Departments for survey:

Assembly, Transmission, Design, Quality, Fabrication

These forms were distributed to the participants to record the feedback and suggestions that they had, to improve the training programs. The responses were personally collected and were recorded in an excel sheet.

Feedback from the immediate supervisors for the participants who had undergone the training process were also taken. This feedback actually helped to assess / evaluate the level of learning that the participant had received. The supervisor after carefully observing the participant for a period of six months gave the feedback as to whether the participant had actually applied the knowledge he gained after the training program in real-time work situations (on the job). This feedback proves to be very valuable to the analysis as the results are based on the basis of the feedback of both the participants as well as the supervisors. Both the feedbacks were recorded and compared properly to obtain accurate results. Same type of feedback forms were given to the supervisors. The supervisors needed to give the required feedback for all the subordinates for the respective training programs that they have undergone.

Level 4

Results: *"Business results that contribute to the "bottom line"*

Level 4 deals with the results obtained from the above feedback collected. The data collected above was used to find out various results that relate to business. Analysis can be done on various dimensions and results can be drawn on the basis of the same.

Results and Analysis

FEA Advanced Training

Level 1 reaction: 91% (4.54 on a 5 point scale)

Level 2 transfer of learning: 70% (19.29% to 88.74%)

Level 3 Application of learning to the workplace:

Supervisors: 77% (3.87 on a 5 point scale)

Participants: 81% (4.08 on a 5 point scale)

Level 4 Organisational Impact

- Used in the FOPs Test of 10T Wheel Loader Cabin
- Crash Analysis of FE 260 Dumper
- FE Analysis of JVF 4R Backhoe Boom
- Optimum design in a shorter cycle time with lesser testing
- Advanced analysis of both the structures was done

Total Investment on Training: Rs 52,089 /-

Benefits: Rs 1, 61,022/-

Programme Name: Welding and Fitting (Boom Manufacturing process)

Level 1 reaction: 92% (4.6 on a 5 point scale)

Level 2 transfer of learning: N.A

Level 3 Application of learning to the workplace:

Supervisors: 94% (4.7 on a 5 point scale)

Participants: 86% (4.3 on a 5 point scale)

Level 4 Organisational Impact

The in-process measures (UT Testing of joints in the boom) have shown a drastic improvement of approx. 50%. Final validation of the same can done only after the machine clocks 15,000 to 20,000 hrs.' in the field (2 years).

Projected savings on each Rs 11, 87,534/- per boom.

Total Investment on Training: Rs 18,333/-

Benefits: Rs 11, 87,534/-

Programme Name: GQD Training Programme

GQD Scores (overall)	2011: 3.76 on a scale of 5
	2013: 4.13 on a scale of 5
GQD Scores (XYZ Plant)	2011: 3.76 on a scale of 5
	2013: 4.13 on a scale of 5

Table 1 : Programme Name: General Safety Training Programme

Number of Reportable accidents	1	2	0
Man-days lost due to Reportable accidents	27	56	0
Number of Non Reportable accidents	2	3	3
Man-days lost due to Non Reportable accidents	2	5	3

Source : Company data.

Table 2 : Analysis on the basis of scores extracted from the feedback forms:

Measurement Criteria	Operators	Supervisors	Managers
Use of knowledge	4.3	4.41	4.29
Confidence in ability to perform	4.4	4.55	4.4
Barriers and enablers of transfer	4.29	4.38	4.33
Impact measures	4.36	4.47	4.35

Source : Company data.

Conclusion

- Employee training & development is of prime importance to any organization.

- The training process at ABC Ltd. is rigorous and as the trends depict, has yielded desirable results.

- The company has effectively been able to capitalize on the trainings programs provided to the employees.

- Training needs identification is a crucial stage in training & development of employees. Training needs are generated from Appraisal, Skill Mapping & Company needs.

- Safety has been a priority at ABC Ltd.

- The return on investments have been fair and have considerably contributed towards the profitability of the concern.

- 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.

Limitations of the study

- The reaction stage only shows a quick opinion of the participants therefore, the results may or may not be authentic and hence should not be used as a solid base for analysis purpose.

- More time is needed as it requires greater insight to the evaluation process to develop valid measures of learning.

- Time constraint: As the SIP training period was only for 8 weeks, analysis for only few training programs was possible.

Recommendations

- One should always use a closed group in order to make data collection more specific and results to be more authentic.

- Proper feedback should be taken and designing of the feedback form should be done properly in order to cover more dimensions.

- Feedback should be collected a bit early (within a period of 3-4 months) so that the trainees remember what they learnt and provide proper feedback.

- Supervisors must be given regular reminders to closely observe the trainees working under their supervision. This would enable them to give proper feedback of the trainee's performance on the job.

- The feedback should be properly evaluated with the help of expertize in order to get accurate and authentic results.

- Seriousness must be developed among the employees for these training programs. The training and development department should make the employees aware of the importance of these training programs.

- Both pre-test and post-test scores should be evaluated properly in order to assess the accurate shift in knowledge among the participants.

Learnings: Personal and Professional

- Developed a process view of the entire training process at ABC Ltd.

- Exposure to various HR functions at ABC Ltd.

- Learnt how to work in a group with fellow interns.

- Got an opportunity to enhance MS-Excel skills.

- Learning about how to communicate with employees at senior levels.

- Developing an integrated system view about understanding of the importance of organizational functions, policies and growth-oriented strategies for any assignment to avoid hassles.

176

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