

Research Article



A Model of Kirkpatrick Training in Structuring Equation Model.

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ABSTRACT

The present study aim is to determine the factors of training and development effectiveness by evaluating the context, inputs, process and outcomes of training between the both public and private banks in India. The objective of the study is to look at the relationship between employees and management of the selected banks. Hence the factors relating to training effectiveness of selected banks were identified. The study noticed the promotional strategies adopted by both private and public banks in India. Moreover, this study examines the differences in management and employees perception with respect to training and development effectiveness and provides the theoretical framework to improve the effectiveness of the training and development program in the context of Indian scenario. Present study shed light on the training and development processes adopted by the banks in general and specifically highlight the differences adopted by the private and public banks in India.

Keywords: Training and development, kirkpatrick model, effectiveness in training, factors and variables.

INTRODUCTION

In Indian studies with respect to the training effectiveness is rare. Therefore, the present study analyse the factors related to training effectiveness of the private and public sector banks in India in a well-specified framework accounting for the job specific and individual differences. Moreover, the training effectiveness at various levels needs to be examined in detail based on appropriate empirical techniques.

Thus the need of this hour is to study the factors which are responsible for the effective training program through evaluating the input, context, process and outcome of the training program among the public and private sector in Indian banks. In this particular point the present study reveal the progress of the modern banking.

Research Objectives

- To propose a 'training and development' framework to enhance effectiveness of training and development program in Indian scenario.

Research Questions

What are the various factors that would influence training and development effectiveness?

Review of Literature

The areas of evaluation could be effectively categorized by the most familiar approach called Kirkpatrick Model. While observing a group of three hundred Human Resource Development executives from various U.S firms, the American Society for Training and Development (ASTD), confirmed the efficacy of Kirkpatrick Model. ASTD conducted this analysis in 1997¹, in order to identify how frequently the assessment and evaluation were

conducted by HRD executives. Most of the Human Resource Development practitioners (i.e., eighty one percentages) were found to give importance to evaluation. It was also found that Kirkpatrick Model had been adopted by sixty seven percentages of them. In another study it was found that among ten firms only one firm tried to conduct outcome-oriented evaluation (ASTD 1997, 2002)². In an effort to evaluate an administrative training session, Kirkpatrick carried out an analysis in 1952³. Quantification of responses of trainees, extent of training, post-training behavioural changes as well as the achievements of the staff after training was the major objectives of this evaluation.

An idea to divide the Kirkpatrick assessment level in to four had emerged from this analysis. These assessment levels had been mentioned as four steps of training evaluation by Kirkpatrick, in his article about training. The reason why these steps are known as the Kirkpatrick Model was not unknown even to Kirkpatrick himself. But most of the educational or technical training sessions are being evaluated by this model. How well the learners liked the training session could be represented by first level of assessment of Kirkpatrick's model. The quantification of talents, attitudes and competence gained from training could be done by second level of assessment. Behavioural changes after training sessions could be measured by third level of assessment. The knowledge transfer is through the training program in relation to the work environment and its behaviour. The differences between identification of objectives and methods and the application of these objectives as well as the methods had been recognized by Kirkpatrick. Estimated outcomes of many training sessions that include enhanced returns or self-esteem, value and extent of production, cost reduction, reduced



absenteeism and grievance could be measured in the final level.

Problems Associated with Kirkpatrick's Model

As stated by Kirkpatrick, if the Kirkpatrick's model is divided into logical steps, the complications in evaluation and indefinable overview could be avoided.

A training session could be assessed at each level as per the four level model of Kirkpatrick's (Reaction, Learning, Behaviour and Result). Level one measurement that focuses on responses of the trainees is the general step in all evaluations.

Most of the trainers believe that if the trainees show extreme interest in training in the beginning itself, the training environment will be good.

How well the training programs were conducted and the feedback of the trainers could be assessed at the first level of measurement. The ability of trainees in performing the learnt tasks could not be predicted by a favourable reaction.

The first level of measurement should be handled with caution, as it couldn't directly indicate the post-course performance.

Researchers should keep in mind that Learning could not be ensured with a favourable reaction. Few researchers mentioned that level-two evaluation is also difficult.

As there is no adequate literature on level three and four (Behaviour and Result) measurements, the researchers could not explain the issues related to them.

Superior training performance will not always lead to effective behavioural changes in the work atmosphere.

Moreover, with a favourable reaction, the researchers could not assure for effective learning in the training session. It is found that only less than ten percentages of the efforts given for training actually involves in knowledge transfer to the work setting. The trainers rarely set the behavioural objects.

Though various analyses have been carried-out, there is a slow progress in the evaluation techniques. Level-four measurement (results) is found to be very tough, expensive and time-consuming when compared to other levels. However, it is the crucial factor as it finds out the changes required to make the training programs effective.

Research Methodology

The present study adopted mixed research approach where both qualitative and quantitative research approach gathered to collect the primary data in order to make the researcher to feel more confident on outcome of the study.

Primary data was collected through the questionnaire during the period of one year from 2015 to 2016.

Structured closed ended Questionnaire was prepared using previous literature and distributed to all the hierarchy of employees of selected branches of private and public sector banks in India with sample size of 350 from public banks and 330 from private banks and total of 680 respondents.

All the cadres of employees of banks were selected for the study purposes.

The data was also collected by conducting interview with trainers and HR department official to obtain their views on the training program.

Secondary data was also collected from various sources like text books, peer-reviewed journals, magazines, and annual reports of reserve bank of India, Government reports, prime directory, newspapers and authenticated internet materials.

SPSS version was employed for the data examination procedure so that quantitative information are examined and presented and further implements both descriptive and inferential statistics.

SEM analysis is used in this study is to determine the extent to which the theoretical model is supported by sample data.

RESULTS AND FINDINGS

Structural Equation Model

To test the theoretical models, Structural Equation Modelling (SEM) is used as per the guidelines of SEM literature. SEM tests theoretical models using the scientific method of hypothesis testing to advance researcher understanding of the complex relationship amongst constructs.

The goal of using the SEM analysis is to determine the extent to which the theoretical model is supported by sample data. It followed 5 building blocks they are:

1. Model Specification
2. Model Identification
3. Model Estimation
4. Model Testing
5. Model Modification

Structural equation models are known for testing the theory with help of model and data. In the following section, hypothesis and model are given, and the result of the SEM is discussed in detailed.

Testing of Hypothesis through SEM

H1-There is significant association between Learning objectives and Material facility.

H2-There is significant association between Learning objectives and Role supervisor.

H3-There is significant association between Learning



objectives and Training effectiveness.

H4-There is significant association between Material facility and Role supervisor.

H5-There is significant association between Material facility and Training effectiveness.

H6-There is significant association between Training effectiveness and Role supervisor.

H7-There is significant impact of Learning objectives on Pre training Act.

H8-There is significant impact of Learning objectives on Post training Act.

H9-There is significant impact of Material facility on Pre training Act.

H10-There is significant impact of Material facility on Post training Act.

H11-There is significant impact of Training effectiveness on Pre training Act.

H12-There is significant impact of Training effectiveness on Post training Act.

H13-There is significant impact of Pre training Act on Behaviour.

H14-There is significant impact of Pre training Act on Perceived Out.

H15-There is significant impact of Post training Act on Behaviour.

H16-There is significant impact of Post training Act on Perceived Out.

H17-There is significant impact of Behaviour on Report.

H18-There is significant impact of Behaviour on Growth.

H19-There is significant impact of Perceived Out on Report.

H20-There is significant impact of Perceived Out on Growth.

H21-There is significant impact of Report on Growth.

Proposed Theoretical Model to Test

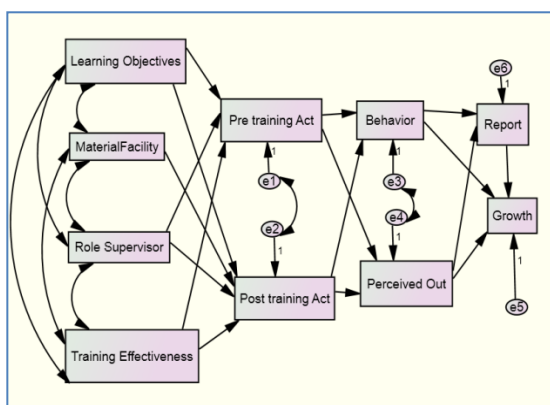


Figure 1: Theoretical Model to Test

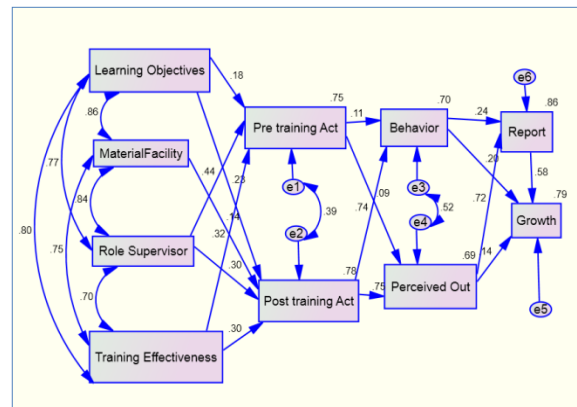


Figure 2: Tested Model – SEM Output

Table 1: Model Fit

Parameter	Observed Vale	Recommended Value
Chi Square (d.f)	208.031 (21)	
CMIN/DF	9.9	2.5. to 4.5 is very good, < 10 Fair model
RMR	.031	0.05 to 0.08 (Hu & Bentler)
GFI	.946	> 0.9 (Hooper)
CFI	.979	> 0.9 (Hooper)
TLI	.95	> 0.9 (Hooper)
RMSEA	.10	.08 to 1.0 (MacCallum).

From the Table given above we can see that the Model fit is established for the model proposed for this study.

Table 2: Correlation Among the Constructs

			Estimate	S.E.	C.R.	P value
LE1	<-->	MF	0.862	0.031	17.014	***
RS	<-->	MF	0.842	0.038	16.784	***
TE	<-->	RS	0.698	0.04	14.915	***
LE1	<-->	RS	0.772	0.034	15.919	***
LE1	<-->	TE	0.802	0.034	16.307	***
TE	<-->	MF	0.754	0.036	15.681	***

*** <.0001 significant

From the above table it is understood that, Learning Objectives and Material Facility are highly correlated which is .862, followed by Role Supervisor and Material Facility which is.842.

The lowest correlation is Training Effectiveness and Role Supervisor is.698.

For all the correlation Critical ratio (CR) is greater than 1.96 which is significant at least 5 % level. Since all the CR exceeded more than 10 it is significant at.0001 levels.

Hence we proved first six hypotheses (H1 through H6) all are statistically significant hence our model is good fit for the data.

Table 3: Structural Model Relationships

			Estimate	Std. Estimates	S.E.	C.R.	P	SMC
PRET	<---	LE1	0.2	0.182	0.04	4.9	***	0.747
POST	<---	TE	0.269	0.301	0.02	9.71	***	
POST	<---	RS	0.26	0.295	0.02	8.84	***	0.78
POST	<---	LE1	0.25	0.23	0.04	5.83	***	
POST	<---	MF	0.141	0.14	0.03	3.56	***	
PRET	<---	RS	0.389	0.439	0.02	14.14	***	
PRET	<---	TE	0.291	0.324	0.03	9.8	***	0.747
BEHA	<---	POST	0.855	0.742	0.04	18.54	***	0.699
PERC	<---	PRET	0.106	0.091	0.04	2.23	.025*	0.692
BEHA	<---	PRET	0.123	0.108	0.04	2.7	.007**	0.699
PERC	<---	POST	0.893	0.754	0.04	18.59	***	0.692
REPO	<---	PERC	0.642	0.718	0.02	25.97	***	
REPO	<---	BEHA	0.217	0.235	0.02	8.52	***	0.86
GROW	<---	BEHA	0.196	0.195	0.03	5.44	***	
GROW	<---	PERC	0.139	0.143	0.04	2.96	.003**	0.787
GROW	<---	REPO	0.632	0.58	0.05	12.23	***	

*.05 **.01 ***.001 sig level

Hypothesis 7 through Hypothesis 21 output is shown in this table, CR ranges from 2.96 to 25.97 since CR is greater than 1.96 all the hypothesis are statistically significant at least 5% level. Squared multiple correlation (SMC) is ranged from .692 to .86 the highest impact is established by the combination of Behaviour and Perceived out on Report.

From the Model Diagram above it can be seen that Training Level plays a vital role in influencing Behaviour changes, in turn, behavior impact on Report and Report influencing substantial level on Growth of the organization.

Path Analysis

Path analysis is concerned with the predictive ordering of variables. The starting point is the researcher's theory about the causal relationships among a set of variables. Path analysis produces two major kinds of results. First, path analysis provides estimates of the magnitude of the hypothesized effects of the model. Second, path analysis allows the researcher to test that the model is consistent with the observed data.

Thus, the model can either be deemed consistent and plausible or it can be rejected for inconsistency. Path estimates in this study were calculated using maximum likelihood estimation (MLE). Multiple squared correlations indicated the influence of SL on various constructs.

The Estimate values show that Training dimensions has maximum influence on Growth. Behavior, Perceived out

and Report all together influence Growth aspects for squared multiple correlation of .78 or 78%. R square values are ranges from .69 to .86, which is quiet good.

Outcome of Testing of Hypotheses

The argument in this study is that Training dimensions impacts/influences the dependent variables of Growth, Null Hypotheses were postulated against this argument. Hence model is significant at minimum 5% level. The outcome of the study rejected H1 through H17 null hypothesis and in turn accept alternative hypothesis.

Suggestions for Further Research

Further research can be carried out in the assessment of the appraisal system as a key management tool. The study should determine whether or not the appraisal system is too overloaded to be an effective management tool. Future study should focus on how to ensure genuine, free and fair competition for promotion opportunities in institutions as these greatly affect employees motivation.

CONCLUSION

Present research is combinations of descriptive and prescriptive study contribute to the management literature by investigating various aspects of measuring training effectiveness.

Further, it examines through the case study approach, the employee involved in training is evaluated. From the study it is helpful to analyze the data not only for banks and for all the sectors. In future it is helpful to research

on foreign banks. The study noticed the promotional strategies adopted by both private and public banks in India. Moreover this study examines the differences in management and employees perception with respect to training and development effectiveness and finally gives the theoretical framework to improve the effectiveness of training and development program in Indian scenario.

REFERENCES

1. Chahal A., "A Study of Training Need Analysis Based Training and Development: Effect of Training on Performance by Adopting Development Based Strategy," *Int. J. Bus. Manag. Invent.*, 2(4), 2013, 41–51.
2. Armstrong. M., *Human resource management*, 2nd Ed. London: Kogan Page Limited, 2007.
3. Carnevale A.P and Schulz E.R., "Economic accountability for training: Demands and responses," *Train. Dev. J.*, 44(7), 1990, S2–S15.
4. Lewis P and Thornhill A., "The Evaluation of Training: An Organizational Culture Approach," *J. Eur. Ind. Train.*, 18(8), 1994.
5. Kirkpatrick D.L., "Great ideas revisited: Techniques for evaluating training program," *Train. Dev.*, 50(1), 1996, 54–59.
6. Phillips J.J., *Handbook of training evaluation and measurement methods*, 2nd edition. Houston. TX: Gulf, 1991.
7. Kirkpatrick D.L., *Evaluating Training Programs: The Four Level*. San Francisco: Berrett-Kochler, 1998.
8. Kirkpatrick D.L., *A practical guide for supervisory training and development*. MA: Addison-Wesley Publishing Co., 1971.
9. Bramley P and Kitson B., "Evaluating Training Against Business Criteria," *J. Eur. Ind. Train.*, 18(1), 1994, 10–14.
10. Goldstein I.L., *Training in organizations*, 3rd Edn. Pacific Grove, CA: Brooks/Cole Publishing Company, 1993.
11. Hoyle A.R., "Evaluation of Training — A Review of Literature," *Public Adm. Dev.*, 4, 2006, 275–282.
12. Barron T., "Is there an ROI in ROI?. In: D. Kirkpatrick, ed," in *Another look at evaluating training programs*, Alexandria, VA: American Society for Training and Development, 1997, 191–194.

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