# A STUDY ON EFFICACY OF INDUCTION TRAINING PROGRAMME IN INDIAN RAILWAYS USING FACTOR ANALYSIS

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**Abstract.** The induction training is very vital for all the new recruits. It helps to reduce the time and cost for the employees to adhere to the organization and facilitate the new employees to perform effectively. It helps the employees to feel with greater morale and they create oneness and cohesiveness among the members of the organization. Hence this internal motivation, the warm feeling as well as initial level of   skills and knowledge imparted by the induction training helps the new recruits to glue themselves easily to their job and towards the organization. The study analyze the factors that influences the effectiveness of induction training programme and the impact of induction training programme towards middle and lower level employees using factor analysis.

## Introduction

In the recent past, induction-training programme have become the vital area of concern for all the organizations. Induction training is the initial training given to new employees. The first impression is very vital, when new employee join the organization. The initial interaction and relationship the organization has with the new employee is very important to decide upon the future accomplishment and responsibility in the later period. Training is the systematic procedure by which an employee enhances the knowledge and skills for doing a particular job. It means the training is the intended and organized activity to impart skills, knowledge and technology with a systematic methodology which is very vital to the employees.

It is always true that 'first' is always difficult and it is also a fact that new employees who joins the organization has lots of hope, expectation about job, boss, environment, nature of work etc. It is the duty of the organization to make the new employees to feel at home. The effectiveness of induction programme depends not only in introducing the new recruits but it is right strategy to make the employee as a "Right" fit to the organization. So, it should be done systematically, methodically and meticulously and make the employee to adjust to work culture. Hence more importance is given for the effectiveness of induction training and need to be evaluated periodically to improve the induction programme. The study efficacy of induction training programme and its impact in Indian Railways is vital and the importance of induction training cannot be under estimated because it is the basic strategy in fine tuning the behavior of the new entrants. This basic adaptive behavior created in induction training programme for employees is the foundation for the intended success of the organization. The evaluation of the training for its effectiveness is of equal importance as designing and implementing the training programme. The objective of training evaluation is to determine the level of competence and skill for different job and it help to understand the level of skill gap among employees which will also be basic information for performance appraisal. Such an evaluation of induction trai-

ning is carried out in Southern Railways, Tiruchirappalli division, India. It is very important in Railways since it's a huge organization, which has more number of employees in different departments, and it's also a service sector and the services towards the public. Hence it is needed that all the employees who are newly recruited need to know about the organization, its policies and the nature of work.

## 1. Statement of problem

Induction training continues to be the vital issue for organization, which has also got a great deal of attention in the literature. This is because the employees who enter the organization needs to be trained as he/she has a potential of creating, maintaining and improving the organization's culture, values, norms, performance etc. Therefore, the induction training should be effective to new recruits in such a way that they become the precious assets of the organization. Southern Railways being the government organization designs its induction-training programmes by itself. Since it's a huge organization, recruitment is continuously done and candidates are taken into the organization at various departments and cadres from various cultures. Hence the effectiveness of training programmes becomes a great challenge for the organization to design in a appropriate manner for different level new employees. Southern Railways being a sector dealing with public has to be very careful and proficient in designing and implementing the induction-training programmes. Even if one factor is missed or not competently included and delivered it directly affects the new employee's performance and therefore affects the organization as well as the society as whole. Since the new recruits are going to be the underpinning for the current success of the organization and they are also the pillars for the future performance of the organization. They are also involving to the well being of the society, so induction training programme should be well-organized in organization like Southern Railways. To make the induction training more effective, evaluation of the induction training programme is essential. Hence the study on effectiveness of induction training programme is very vital for all organization especially in Southern Railways, which is a biggest governmental service organization.

## 2. Significance of the study

Induction is the training given to the new recruits. It is very important for all the type of organization. It is for enhancing the efficacy of performance of new employees. The purpose of the induction training is to facilitate new employee to settle quickly and familiar with the job. Induction training is indirectly helping individual to retain in the organization which also end in individual development and organization growth. An effective induction training make employee more comfortable in the new environment and culturally

fit in the organization with the new roles. The evaluation of such induction training is important as it provides feedback that whether the training activity is in right direction and it is effective to achieve the purpose. It also gives a clear picture to the new employees about, what the organization expects from the employees and also to have an understanding about organizational goals and norms. Southern Railways being a Government and public service oriented organization needs its new recruits to be efficiently trained to get the best out of them and to retain them. The effectiveness of the induction training programmes should be evaluated to ensure that the new recruits have sufficient induction training input to perform their job effectively from the first day so that the organization will also be benefited. The current study has the following objectives:

(i)To study the factors that influences the effectiveness of induction training programme.

(ii)To study the impact of induction training programme to employees with special reference to Organizational procedure factors and Skills obtained.

## 3. Scope of the study

The study on the effectiveness of induction training programme has been undertaken for the lower and middle level of employees in Southern Railways, Tiruchirappalli division. One hundred and seventy nine employees had been taken as sample for the study from different departments, designation and echelon, who attended the induction training programme. The study identifies the effectiveness of the induction training programme in Southern Railways, Tiruchirappalli division and the level of initial readiness of the employees to perform the job offered to them .There are many studies, projects and articles done in the area of induction training, which explains the importance and scope of induction training programmes. From all those works it is evident that the induction training is of the important matter to all the organization. The previous studies also explain the scope of induction training, how it helps to retain the new employees and enhancing organizational productivity. All the studies emphasized the importance of induction training, which has been analyzed in the current study.

## 4. Review of literature

Loveless, C. P. (2010) the purpose of the study was to explore the perceptions of new elementary school counselors about their mentoring/induction program in a large suburban school district in the southeastern United States. Stoltzfus, K. M. (2010) this study sought to identify specific leadership styles and behaviors that were related to teacher's transfer of training. Harmon, Ch. M. H. (2009) the purpose of this study was to review the scope of induction experiences that teachers gain when entering employment in a Christian

school by investigating transitional program effectiveness, teacher academic preparation, and preparedness to all subject areas and teaching methodologies. Nard, P. A. (2007) this applied dissertation focused on classroom experiences of beginning teachers with student discipline problems in a Midwestern U.S. school district. Hudson, G. B. (2004) the survey gathered quantitative information on Demographic Information; Team Selection, Logistics, and Duties; Team member Training; and Overall Effectiveness about training. Weaver-Meyers, P. L. (1989) this study surveyed academic library department heads and staff development officers to determine if they considered instructional design practices appropriate to academic library staff development, and whether these middle managers use instructional design practices when preparing training materials. The study also investigated if appropriateness and application of the practices differed with respect to induction training, job training or developmental training. Kearney, H. (1986) the effect of induction training and role-playing training on the prosaically behavior of preschoolers is examined empirically. Lobanova, L. (2009) the article analyses the features of human resources management competences in terms of completing human resources management functions in practice with a view to advantages of human resources management approaches compared with traditional approaches to human resources management.

Okunevičiūtė Neverauskienė, L. and Pocius, A. (2010) the need for specialists with higher education is assessed in the article. The tendencies of change in group dynamics are analyzed. Important priority of the article is prognosis of the need for specialists.

Anderson, N. R. *et al.* (1996) studied by conducting a survey in British organization to understand recent practices of induction training. Klein, H. J. and Weaver, N. A. (2000) studied the relationship between orientation training and employee commitment. Zahhly, J. and Tosi, H. (1989) studied the relationship between formal induction training and job satisfaction. Cooper-Thomas, H. D. and Anderson, N. (2006) developed a model for Organisation Socialisation Model. Holton (2001) studied the relationship between new employee development tactics and job attitude. Wesson, M. J. *et al.* (2005) studied the impact of computer based orientation towards organizational orientation. Ron, Z. (1989) concluded that poor orientation can reduce new employees effectiveness and contribution to dissatisfaction and turnover, costing the company money. The orientation programs of large companies such as Disny, Texas Instruments, Corning Glass are successful due to high expectation level of employees, supervisors and senior management involvement, anxiety reduction and realistic job previews. From all these review, it is observed that induction training have been an important issue in all the organization especially to retain the employees and to increase the productivity as soon as possible. This study has tried to contribute some of the factors that are essential to assess the effectiveness of

the induction-training programmes at Southern Railways. Evaluating such induction-training to ensure effectiveness involves various factors which have been studied in this article.

## 5. Research methodology

To study the effectiveness of induction training at southern Railways is based on descriptive research design it describes and explains the phenomenon of induction and its effectiveness in Indian railways. Primary and secondary data were collected for the study of the effectiveness of induction training in Southern Railways, Tiruchirappalli division. The primary data has been collected by means of executing a structured questionnaire and through one to one interaction with the employees of Southern Railways who recently undertook the induction programme. The stratified random sampling method was used to choose the samples, after making different strata/classification/ division in the population. Here the sample size is 179 who recently attended the induction programme at Southern Railways both at lower and middle level of management. Indian railway is one of the biggest rail net works in the world transporting around twenty five million commuters and around two million tons of cargo every day.

## 6. Analysis and Results

**Table 1.** Demographic detail of Railway employees who participated in induction training

| Particulars | Categories | Number of employees | % |
|---|---|---|---|
| Age | 20 to25 year | 89 | 50 |
| | 26 to30 years | 39 | 22 |
| | 31 to 35 years | 51 | 28 |
| Gender | Male | 154 | 86 |
| | Female | 25 | 14 |
| Level of management | Middle level employees | 143 | 80 |
| | Lower level employees | 36 | 20 |
| Educational qualification | Completed high school | 74 | 41 |
| | Certificate/ diploma course | 21 | 12 |
| | UG degree | 68 | 38 |
| | PG/ Professional | 16 | 9 |
| Monthly income (Rupees) | 5000 to10000 | 54 | 30 |
| | 10001 to 20000 | 125 | 70 |

*Source: Primary Data*

From the above table 1, it is inferred that the total respondents are 179 and they are classified based on their age, gender, level of management they belong to, their educational qualification and the monthly income they are getting after induction training. Among the 179 respondents, 50% are from 20 to 25 years category of age, 22% belong to the age group of 26 to 30 years and 28% are from the age group of 31 to 35 years, 86% are males and 14% are females. Considering the level of management 80% are from the middle level management and 20% are from lower level of management. 41% of the total sample have completed only high school, 12% have completed certificate/diploma course, 38% have completed UG degree and 9% have completed their PG degrees and professional courses. Regarding the monthly income 30% of the samples are categorized under the category of Rs. 5000 to 10000 and 70% are categorized Rs. 10001 to 20000 group.

The Cronbach Alpha is (0.831) which is used to examine the reliability of the data collected and to test out whether the random error has been causing any inconsistency. Various important factors linked with the effectiveness of the induction have been used in a set of questionnaire. The coefficient of Alpha is higher than (0.6) and the data has satisfactory internal consistency and reliability.

From the above table it is also clear that the mean scores for the building layout (2.11) has been ranked one, relevant personnel policies such as training, promotion and health and safety (1.771) has been ranked as second, norms and values of Railways (1.693) as third among the organizational factors perceived from the induction training. The data collected were evaluated by formulating hypothesis and by using various statistical tools and the results are portrayed in the following session.

The Induction training programme of Indian Railways has various objectives like,

– Reduce initial anxiety of the employees,

– Familiarize new employees with job, people and work environment,

– Reduce culture shock of new employees in the new organizational environment.

**H1:** There is no association between objectives of the induction programme and the contents included in the Induction training programme.

**H2:** There is no association between objectives of the induction programme and Skills obtained after attending induction training.

By using Chi Square test the association between the objectives of the Induction training programme and the contents included in the induction programme like organizational procedures and skills obtained after attending induction training are analyzed by formulating hypothesis.

**Table 2.** Reliability Analysis

| Contents of Induction Training | Mean | Cronbach's Alpha |
|---|---|---|
| **Organizational procedure factors** | | |
| Department etiquettes | 1.5587 | .833 |
| Communication procedure | 1.4972 | .849 |
| Policies of Railways clearly defined | 1.6425 | .850 |
| HR policies which includes training, career growth, health and safety | 1.7709 | .834 |
| Procedural norms of Railways | 1.5698 | .843 |
| Welfare measures and benefits provided in railways | 1.4749 | .842 |
| Norms and values of Railways | 1.6927 | .827 |
| Introduction to/about the department | 1.5642 | .826 |
| Introduction about the organization structure | 1.6480 | .834 |
| Layout of the buildings | 2.1173 | .849 |
| **Skills obtained from induction training** | | |
| Soft Skill desired for job | 1.4078 | .841 |
| Technical skills desired for the job | 1.3240 | .835 |
| Acquiring technical skills and knowledge | 1.2291 | .827 |
| Developing managerial capabilities | 1.5363 | .833 |
| Developing human relations competencies | 1.3408 | .824 |
| Overall Cronbach's alpha | | (0.831) |

*Source: Primary data*

**Table 3.** Chi-square analyses for contents of induction programme Vs. Objectives

| Organizational procedure factors | Chi square value | Sig |
|---|---|---|
| Department etiquettes | 112.8 | 0.000 |
| Communication procedure | 23.698 | 0.001 |
| Policies of railways clearly defined | 187.6 | 0.000 |
| HR policies which includes training, career growth, health and safety | 105.4 | 0.000 |
| Procedural norms of railways | 109.3 | 0.000 |
| Welfare measures and benefits provided in Railways | 31.37 | 0.000 |
| Norms and values of Railways | 54.12 | 0.000 |
| Introduction to/about the department | 67.368 | 0.000 |
| Introduction about the organization structure | 85.679 | 0.000 |
| Layout of the buildings | 200.03 | 0.000 |
| Skills obtained from induction training | | |
| Soft Skill desired for job | 69.021 | 0.000 |
| Technical skills desired for the job | 108.0 | 0.000 |
| Acquiring technical skills and knowledge | 120.1 | 0.000 |
| Developing managerial capabilities | 71.163 | 0.000 |
| Developing human relations competencies | 93.028 | 0.000 |

*Source: Primary data*

From the above table the chi square value is very high for the organizational procedure factors (ie) Department etiquettes (112.8), Policies of Railways clearly defined (187.6), HR policies which includes training, career growth, health and safety (105.4), Procedural norms of Railways (109.3), Welfare measures and benefits provided in railways or facilities at Railways (31.37), Norms and values of Railways (54.12), Introduction to/about the department (67.368), Introduction about the organization structure (85.679), Layout of the buildings (200.03).

The Chi square value is also very high for the Skills obtained from induction training (ie) soft skills needed to perform the job (69.021), technical skills needed to perform the job (108.0), acquiring technical skills and Knowledge (120.1), developing managerial capabilities (71.163), developing human relations competencies (93.028) and the p value (p = 0.000) is less than 0.001. So the alternative hypothesis is accepted (null hypothesis rejected), it is concluded that induction programme contents in Indian railways goes with the objectives of the induction training programme.

**Table 4.** Factor analysis for the contents included in the induction programme

| | Communalities | | Eigen values | Factors Extracted |
|---|---|---|---|---|
| | Initial | Extraction | Total | |
| Department etiquettes | 1.000 | 0.609 | 2.301 | 0.704. |
| Introduction about the organization structure | 1.000 | 0.706 | 1.607 | 0.840 |
| Communication procedure | 1.000 | 0.807 | 1.206 | |
| Policies of Railways clearly defined | 1.000 | 0.615 | 1.053 | |
| Norms and values of Railways | 1.000 | 0.750 | 0.754 | 0.785 |
| Welfare and employee benefits or facilities at Railways | 1.000 | 0.555 | 0.735 | . |
| Rules and procedures of Railways | 1.000 | 0.469 | 0.561 | 0.649 |
| HR policies which includes training, career growth, health and safety | 1.000 | 0.756 | 0.390 | |
| Introduction to/about the department | 1.000 | 0.543 | 0.874 | |
| Layout of the buildings | 1.000 | 0.357 | .519 | |

Extraction Method: Principal Component Analysis.
4 components extracted

| Skills obtained from induction training | Communalities | | Eigen values | Factors Extracted |
|---|---|---|---|---|
| | Initial | Extraction | Total | |
| Soft Skill desired for job | 1.000 | 0.411 | 2.871 | |
| Technical skills desired for the job | 1.000 | 0.536 | 0.800 | 0.862 |
| Developing human relations competencies | 1.000 | 0.664 | 0.554 | |
| Developing managerial capabilities | 1.000 | 0.518 | 0.449 | |
| Acquiring technical skills and knowledge | 1.000 | 0.743 | 0.327 | |

Extraction Method: Principal Component Analysis.
1 component extracted

*Source: Primary data*

From the table 4 the communalities illustrate how much of the variances every factor has been accounted for. It is identified that 81% of the variance for "Communication procedure" is accounted for .While 36% of the variance in "Layout of the buildings" is accounted for in the Organizational procedure factors included in the contents of the induction programme. It is also understood that 74% of the variance for "Acquiring technical skills and knowledge" 41% for "Soft skills needed to perform the job" in the Skills obtained from induction training. Initial communalities are the estimates of the variances in which each variable accounted for by all components or factor contributing to effectiveness of induction programme by the contents included as organization procedure factors in the induction training. The first four factors (i.e.) Introduction about the organization structure (1.607), Communication procedure (1.206), Policies of Railways clearly defined (1.053), Department etiquettes (2.301), in the Organizational procedure factors have Eigen values more than 1 and account for 75.35% of the variance. Similarly "Soft skills needed to perform the job" (2.871) have more than 1 Eigen values. The Eigen value is also called as 'characteristic roots'. The four factors namely i) Introduction about the organization structure, ii) Norms and values of Railways, iii) Department etiquettes, iv) Rules and procedures of Railways, in the Organizational procedure factors and (i) Technical skills needed to perform the job in the Skills obtained from induction training are the major factors which have been included in the contents of the Induction training and that endorse the effectiveness of the training. The proportion of the Eigen values is the proportion of explanatory significance of the factors with respect to variables. If the factor has small Eigen value then it add little to the justification of variances. The table also shows the loadings of the variables and higher the absolute value of the loading, the more the factor contributes to the variable.

From the table 5 it is clear that 56% of the independent variable "Objectives of the programme" influences the dependent variable effectiveness of the programme. 63% of the independent variable "Nature of the programme" influence the dependent variable "effectiveness of the programmme". 54% of the independent variable "Method of the programme" influences the dependent variable "effectiveness of the programme" 71% of the independent variable "Content-organization procedures" influence the dependent variable "effectiveness of the programme". 50% of the independent variable "Content-skills obtained in the programme". Influence the dependent variable, which leads to the effectiveness of the programme.

## Conclusion

From the study it is concluded that there is an association between contents of the induction training and effectiveness of the induction training programme. It is also concluded that by skills obtained by the new employees also determine the effectiveness of the programme. Induction training is very imperative since it is the platform laid in advance for the future success of the organization and retains the employees. This study has analyzed the factors through which the effectiveness of induction training programmes is accomplished in the organization. Thus Induction training programmes have gained a constant interest of many researchers nowadays. Organizations have changed their perception about these trainings as investments made on their (employee) assets rather than expenditure. Especially Induction training is very important since it is the platform laid in advance for the future success of the organization by training the new recruits as required by the organization. As the previous researches study about the design and importance of induction training, this study has tried to add some factors through which the effectiveness of such induction training programmes can be evaluated.

## Acknowledgement

**Table 5.** Regression Model for effectiveness of induction programme Vs. Objectives

| Effectiveness of the programme | R | Coefficient | Sig | Std error |
|---|---|---|---|---|
| Objectives of the programme vs. effectiveness of the programmme | 0.561 | 0.739 | 0.000 | 1.7104 |
| Nature of the programme vs. effectiveness of the programmme | 0.626 | 0.737 | 0.000 | 1.6104 |
| Method of the programme vs. effectiveness of the programmme | 0.535 | 0.717 | 0.000 | 1.7452 |
| Content-organization procedures of the programme vs. effectiveness of the programmme | 0.712 | 0.670 | 0.000 | 1.4503 |
| Content-skills obtained in the programme vs. effectiveness of the programmme | 0.498 | 0.494 | 0.000 | 1.79182 |

*Source: Primary data*

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