



## Effectiveness of Employees' Training and Development in Manufacturing Industries (A Case Study of East Godavari District, Andhra Pradesh)

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### ABSTRACT

*Training refers to a systematic approach to learning and development to improve individual, team, and organizational effectiveness. Improvement and changes of an employee is essential in the manufacturing companies where change is constant in all its functions under four phases such as training need analysis, pre-training preparations, the trainer and trainee involvement during the training and the post training program to import the overall training and development objectives (B.N. Sivakumar and V.Navaneethakumar 2012). The present research study has used statistical tools such as Chi-square and ANOVA and obtained inferences. Majority of the respondents by virtue of the differences in their education, department and position expressed that the training imparted the improved benefits.*

**Keywords : Training and development, education, position and benefits of training.**

### INTRODUCTION

Organizing a significant number of training programs for the employees are very vital in order to enhance the capability level and the skill set. The performances of employees in the respective departments are directly proportionate to the number of training programs attended. Improvement and changes of individual employees is essential in the manufacturing companies where change is constant in all its functions. The overall personality of the employees can be seen changing for the betterment of the company over a period of time. Number of training programmes organized by companies for the employees is based on the importance the companies are giving for the development of its employees for effective performance and for committed relationship. Thus the role played by training and development can no longer be overemphasized. However, the need for organizations to embark on managerial development programmes has become obvious. Absence of these programs often manifests tripartite problems of incompetence, inefficiency and ineffectiveness. Hence, the training is felt vital for the manufacturing industry for its overall growth and development of the employees and the organizations.

As organizations strive to compete in the global economy, differentiation on the basis of the skills, knowledge, and motivation of their workforce takes an increasing importance. "Training" refers to a systematic approach to learning and development to improve individual, team, and organizational effectiveness. Training activities will have a positive impact on the performance of individuals and teams by virtue of change in their attitudes, motivation, and empowerment.

### STATEMENT OF THE PROBLEM

Manufacturing industries are the backbone of Indian economy as provide employment opportunities galore. But over a period of time some of the manufacturing industries are losing viability and becoming sick owing to technical, financial, labor and employment problems. Therefore it is utmost important that the people who manage the manufacturing industries are properly recruited and trained to harness sophisticated technology. Hence, the present paper focuses on training and development of some select manufacturing industries in Andhra Pradesh.

### REVIEW OF LITERATURE

Herman Aguinis and Kurt Kraiger (2009) adopted a multidisciplinary, multilevel, and global perspective to demonstrate that training and development activities in work organizations can produce important benefits for each of these stakeholders. Benson et al. (2004) collected data from each of the 9439 permanent, salaried employees of a large high-technology manufacturing firm to assess the effects on employee turnover of the organization's investment in employee development via a tuition reimbursement program. Colleen Beth Akehurst (2004) in his research examined two specific benefits such as improved quality (i.e. decreased reject rate) and improved equipment performance (i.e. reduced unplanned downtime) and indicated that training benefits a manufacturing process during ramp-up. Littrell et al. (2006) examined 29 prior conceptual reviews and 16 empirical studies and concluded that cross-cultural training is effective at enhancing the expatriate's success on overseas assignments.

They also identified many variables that moderate the effects of training on expatriate performance, including the timing of the training (e.g., predeparture, while on assignment, and post assignment), family issues (e.g., spouse's adjustment), attributes of the job (e.g., job discretion), and cultural differences between the home country and the assignment country. Abdus Sattar Niazi (2011) opined that the business environment has changed with intense pressure on organizations. He carried out an analysis and that the training and development create learning organizations which ensure that employees through value addition can effectively perform their jobs, gain competitive advantage and seek self growth. Haslinda Abdullah (2009) examined challenges to the effective management of training and development activities in manufacturing firms in Malaysia. They observed lack of commitment towards training throughout organizations, sight from top management to shop-floor employees. They found that employees may have embedded pessimistic attitudes towards training and be fundamentally resistant to change. Debrah, et al (2002) claimed that some firms are not providing the training that their employees need, but instead poach employees from other firms, who have already been trained and developed by their prior employers. However, it may seem that poaching is benefiting employers in terms of financial investment in training.

**OBJECTIVES OF THE STUDY**

1. To study the existing policy of the sample companies with regard to training and development of their employees.
2. To find out the opinions of the employees of sample companies on the effectiveness of training programmes conducted by the organization.

**HYPOTHESES**

- H01: Training programmes do not help all the educated respondents equally.
- H02: Training does not impart benefits equally among the employees of different educational background.
- H03: There is no significant difference between educational qualification and opinion on the benefits of the training.
- H04: Impact of training programmes varies from position to position.
- H05: Training programmes do not equally influence all the respondents of varied position
- H06: Post training benefits vary from position to position.

**RESEARCH METHODOLOGY**

The study is designed to explore the behavior of trainees towards training effectiveness and its impact on self-development for organizational success. This section focuses on the methods adopted to conduct the study and the type of the research used. Descriptive research is used in this study. The research imbibes the employees' opinions towards pre, during and post-training metrics, behavior modification and its impact on the companies.

**Sampling design**

The sampling is done on multi stage sampling at the first step of sampling, the size of the sample to be taken from each of the 10 departments in the sample companies is calculated at 10 and percent quota sampling technique, while the sample from each department is selected at 10 percent by following stratified random sampling technique where the employees of the company are divided into three strata such as executives, su-

**Table 2: Education-wise opinion of the trainees that the training programmes helped them to work with ease**

Opinion of the respondents	Education of the trainees						Total no. of respondents
	SSC	Inter	Degree	PG	Diploma	B.Tech.	
Strongly agree	18 (6.0)	11 (3.7)	44 (14.7)	7 (2.3)	13 (4.3)	12 (4.0)	105 (35.0)
Agree	36 (12.0)	35 (11.7)	39 (13.0)	27 (9.0)	52 (17.3)	6 (2.0)	195 (65.0)
Disagree	0	0	0	0	0	0	0
Total	54 (18.0)	46 (15.3)	83 (27.7)	34 (11.3)	65(21.7)	18 (6.0)	300 (100.0)
Chi-square test	$\chi^2$ cal value 56.247, p value 0.000 and is significant @ 1% level.						

Source: Field data.

Note: Figures in parentheses represent percentage to total.

The table 2 explains that 44 degree (14.7%), 18 SSC (6%), 13 diploma (4.3%), 11 intermediate (3.7%), 7 PG (2.3%) and 12 B.Tech (4%) respondents strongly agreed that the training programmes helped them to work easily whereas 52 diploma (17.3%), 39 degree (13%), 36 SSC (12%), 35 intermediate (11.7%), 27 PG (9%) and 13 diploma (4.3%) respondents agreed that the training programmes helped them to work easily, while none disagreed that the training programmes helped them to work easily. Above all, 105 respondents (35%) strongly agreed that the training programmes helped them to work easily and 195 respondents (65%) agreed that the training programmes helped them to work easily. It is concluded that 65 per cent of the respondents agreed that the training programmes helped them to work easily.

**Statistical inference:**

The Chi-square value is highly significant at 1 per cent level and it can be inferred that there exist strong association between their opinion that the training programmes that helped

supervisors and workers, such that the total sample from all the three companies is 300 i.e., 10 percent of 2918 employees.

**Table 1: Sample selection**

S. No	Name of the company	Total no. of employees	Total sample
1	NFCL(Kakinada)	1030	100
2	RIL(Kakinada)	1000	100
3	SSSL(Chellure)	888	100
Total		2918	300

**Period of the study**

The duration of the data taken for research study lies between 2005 and 2012. While the primary data source was collected through a structured questionnaire the secondary data was collected from different publications, reports, websites, magazines, journals, working papers, books and newspapers.

**Statistical tools used**

Percentage analysis, Chi square and ANOVA tests are used to analyse the primary data collected from the respondents.

**Results and discussion**

The perception of employees with regard to the benefits of training on their performance in selected manufacturing industries, such as Nagarjuna Fertilisers and Chemicals Limited (NFCL), Ruchi Infrastructure Limited (RIL) and Sri Sarvaraya Sugars Private Limited (SSSL) have been considered for the present study and the results are presented in the following section.

**I (A) Opinion on the impact of training programmes (education-wise)**

The opinion on whether the respondents feel that the training helped them to work with ease and effectiveness has been elicited and presented in table 2.

them to work easily and education of the employees.

**Hypothesis:**

H01: There is no association between the educations of trainees with regard to their opinion on how the training programmes helped them to work easily is rejected. It can be concluded that the trainees of different educational qualification do differ in their opinion on how the training programmes helped them in their work.

Suggestion: Since 65 percent of the respondents agreed that the training programmes are highly useful to respondents it is highly recommended that the training programmes should be conducted on a regular basis.

**I (B) Opinion on benefits of training programmes (education-wise)**

The information on the extent at which the employees in the organization derived benefit from the training programmes has been elicited and presented in table 3.

Table 3: Education-wise opinion of the trainees on the level at which they were benefited through the training programmes

Level of the benefits through training	Education of the trainees						Total no. of respondents
	SSC	Inter	Degree	PG	Diploma	B.Tech	
Highly beneficial	26 (8.7)	30 (10.0)	61 (20.3)	23 (7.7)	41 (13.7)	3(1.0)	184 (61.3)
Moderately beneficial	28 (9.3)	16 (5.3)	22 (7.3)	10 (3.3)	24(8.0)	15(5.0)	115 (38.3)
Lowly beneficial	0	0	0	1(0.3)	0	0	1 (0.3)
Total	54 (18.0)	46 (15.3)	83 (27.7)	34 (11.3)	65 (21.7)	18(6.0)	300 (100.0)
Chi-square test	χ <sup>2</sup> cal value 33.580, p value 0.000 and is significant @ 1% level.						

Source: Field data.

Note: Figures in parentheses represent percentage to total.

The table 3 explains that 61 degree (20.3%), 41 diploma (13.7%), 30 intermediate (10%), 26 SSC (8.7%), 23 PG (7.7%) and 3 B.Tech (1%) respondents opined that they were highly benefited through training programmes whereas 28 SSC (9.3%), 24 diploma (8.7%), 22 degree (7.3%), 16 Intermediate (5.3%), 15 B.Tech (5%) and 10 PG (3.3%) respondents opined that they were moderately benefited through training programmes. On the contrary, only one post-graduate (0.3%) opined that they were moderately benefited through training programmes. By and large 18 respondents (61.3%) opined as highly beneficial, 115 respondents (38.3%) opined as moderately beneficial and only one postgraduate (0.3%) as lowly beneficial. It is concluded that 61.3 per cent of the respondents opined that they were highly benefited through training programmes.

**Statistical inference:**

The Chi-square value is very significant at 1 per cent level and hence it can be inferred that there is strong association between the opinion of the respondents and the level of the benefits through training programmes attended by the trainees in the organization.

**Hypothesis:**

H02: There is no association between the education of trainees and the benefits derive by them after the training is rejected. It can be concluded that trainees of different educational background do differ in their opinion on the benefits derived by them after the training.

**Suggestions:**

Though 61.3 percent of the respondents highly benefited from training programmes, still 38.3 percent of the respondents moderately satisfied. Hence, in order to make all the respondents highly satisfied, the training programmes should cater to the needs of the respondents of varied qualifications.

Table 4: Education- wise opinion of the respondent on the benefits they derived from training

S. No.	Benefits derived by trainees	Education of the trainees						Total
		S.S.C	Intermediate	Graduation	P.G	Diploma	B.Tech	
1	Improved decision-making skills.	6(27.2)	4(18.2)	6(27.3)	1(4.5)	4(18.2)	1(4.5)	22(7.3)
2	Improved self-confidence	4(18.2)	3(13.6)	7(31.8)	2(9.1)	5(22.7)	1(4.5)	22(7.3)
3	Identification with the goals of the organization	1(7.6)	2(15.3)	2(15.3)	3(23.1)	4(30.8)	1(7.6)	13(4.3)
4	Improved ability to sell the organization products in a customer satisfying manner.	5(27.8)	6(33.3)	3(16.7)	2(11.1)	1(5.6)	1(5.6)	18(6.0)
5	Improved job satisfaction.	3(14.3)	1(4.8)	12(57.14)	2(9.5)	2(9.5)	1(4.7)	21(7.0)
6	Improved prospects for promotion	7(21.2)	2(6.1)	10(30.3)	3(9.1)	10(30.3)	1(3.1)	33(11.0)
7	Improved inter-personal relations.	2(11.8)	4(23.5)	4(23.5)	2(11.8)	4(23.5)	1(5.9)	17(5.7)
8	Improved ability to achieve judicious use of resources.	1(7.1)	2(14.3)	5(35.7)	3(21.4)	2(14.3)	1(7.1)	14(4.7)
9	Improved ability to delegate authority and responsibility.	2(14.3)	3(21.4)	2(14.3)	2(14.3)	4(28.6)	1(7.1)	14(4.7)
10	Improved ability to appraise the performance of organization	4(28.6)	2(14.3)	5(35.7)	1(7.1)	1(7.1)	1(7.1)	14(4.7)
11	Improved public relations.	3(15.7)	1(5.3)	10(52.6)	1(5.3)	3(15.8)	1(5.3)	19(6.3)
12	Better realization of duties and responsibilities	1(7.8)	3(23.1)	2(15.4)	2(15.4)	4(30.8)	1(7.8)	13(4.3)
13	Improved ability to resolve conflicting situation	3(20.0)	2(13.3)	1(6.7)	3(20.0)	5(33.3)	1(6.7)	15(5.0)
14	Improving problem-solving skills	4(25.0)	4(25.0)	2(12.5)	2(12.5)	3(18.7)	1(6.25)	16(5.3)
15	Enriching the knowledge through interaction with other people	2(18.2)	2(18.2)	3(27.3)	1((9.1)	2(18.2)	1(9.1)	11(3.7)
16	Relief from the day-to-day routine.	3(23.1)	2(15.4)	1(5.3)	1(5.3)	5(38.5)	1(7.8)	13(4.3)
17	Conflicting skills	1(11.1)	1(11.1)	3(33.3)	1(11.1)	2(22.2)	1(11.1)	9(3.0)
18	Improved job satisfaction.	2(12.5)	2(12.5)	5(31.25)	2(12.5)	4(25.0)	1(6.25)	16(5.3)
	Total	54(18)	46(15.3)	83(27.7)	34(11.3)	65(21.7)	18(6.0)	300(100.0)

Source: Field data.

Note: Figures in parentheses represent percentage to total.

The table 4 presents that 33 respondents (11%) including 10 degree (30.3%) and 10 diploma (30.3%) respondents opined that the training improved prospects for promotion, 22 respondents (7.3%) of each including 6 SSC (27.2%) and 7 graduates (31.8%) opined that the training improved decision-making skills and self-confidence, 21 respondents

(7.0%) opined that the training improved self-confidence, 19 respondents (6.3%) opined that the training improved their public relations, 18 respondents (6.0%) opined that the training improved ability to sell the organization products in a customer satisfying manner, 17 respondents ( 5.7 %) opined that the training improved inter-personal relations and 16 respondents (5.3%) each opined that the training improved problem-solving skills and job satisfaction. It is concluded that majority of the respondents of graduation and diploma de-

rived maximum benefits.

The ANOVA test for benefits derived by the trainees has been presented in table 5.

Table 5: Education-wise opinion of the trainee's on the post-training period

Education	N	Mean	Std. Deviation
S.S.C	54	16.093	0.807
Inter	46	16.283	0.806
Graduation	83	16.012	1.076
P.G	34	15.676	1.451
Diploma	65	15.569	1.104
B.Tech	18	15.667	0.840
Total	300	16.313	6.900

The table 5 elucidates that the mean of the sample respondent's opinion is highest among intermediate respondents and lowest among diploma respondents. The standard deviation is maximum among PG respondents and minimum among intermediate respondents.

Source of variation	Sum of Squares	df	Mean Square	F	Sig.
Between groups	19.516	5.000	3.903	3.561	0.004
Within groups	322.231	294.000	1.096		
Total	341.747	299.000			

Table 5(a): ANOVA

**Statistical inference:**

The ANOVA table 5(a) depicts that the F value is highly significant and hence the null hypothesis H03 that "there is no significant difference among the trainees of different educational qualifications with regard to their opinion on the benefits received from training programme" is rejected. It can be concluded that the trainees of different educational qualifications do differ very much from one another in their opinion on the benefits received by them after the training programme.

**Reason:**

The respondents have perceived varied benefits at varied levels owing to various levels of educational qualifications.

**Suggestion:**

The organization have to create an environment such that the training will have its circular impact on perceptual skills of employees and in turn on their performance through their prefer perception of training activities.

Table 6: Acceptance / rejection of hypotheses

S. No	Hypothesis	Accepted	Rejected
1	Training programmes do not help all the educated respondents equally		Rejected See table 2
2	Training does not impart all benefits equally among the employees of different educational background.		Rejected See table 3
3	There is no significant difference between educational qualification and opinion on the benefits of the training		Rejected See table 5

**CONCLUSION**

Improvement and changes of an employee is essential in the manufacturing companies where change is constant in all its functions and hence training should be a continuous process that demands a range of activities to support the overall training and development objectives. Organizing a significant number of training programs for the employees are very vital in order to enhance the capability level and the skill set. The performances of employees in the respective departments are directly proportionate to the number of training programs attended.

**SUGESTIONS**

The training programmes should be conducted on a regular basis as only 65 percent of the respondents agreed that the training programmes are highly useful. In order to make all the respondents highly satisfied, the training programmes should cater to the needs of the respondents of varied qualifications as still 38.3 percent of the respondents moderately satisfied. The organization have to create an environment such that the training will have its circular impact on perceptual skills of employees and in turn on their performance through their prefer perception of training activities. The training programmes should be arranged in such a way that they shall be highly useful to all of the respondents.

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