CHAPTER-4

RESEARCH METHODOLOGY

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INTRODUCTION

The present research study sheds light on the effectiveness of training activities in reputed Manufacturing Companies in Ahmednagar District.

The chief objective of the study is to find out the effect on the employees who undergo training and development activities conducted by the organization under research and the present chapter focuses on the methods used to gather and analyze the data during the research. It also proposes the methodology for data interpretation. In this research most of the data is collected by survey method. The reason for using these techniques is also discussed along with its relative advantages. The type of research used was exploratory research. This research includes detailed analysis of all data collected from large scale manufacturing companies of Ahmednagar District.

4.1 TOPIC OF RESEARCH AND ITS IMPORTANCE

The topic of research is “Impact of training on employees’ performance” – A study of selected manufacturing units in Ahmednagar District. The topic is approved by North Maharashtra University.

HRD essentially aims at improving the performance of employees through systematic training, career development and thereby organizational development. It is evident that if HRD issues are not properly handled, then organization may face decreased performance and may start a slow decaying. Productivity may suffer and cultural clashes may increase. Employees may suffer low skills and low knowledge. Attracting and retaining talent becomes difficult task for the organization. It is also true that successful outcomes are possible only with the quality of the training provided to the employees. It is equally important to assess the need of the training, the nature of the training provided, the methods and the selection of the training programs and ultimately evaluation of the training programs are important for the sound health of the organization.

It is worthwhile to note that training offers many benefits to employees and to the organization as a whole. Employees become more confident, open to change and supportive
to each other. In addition, employees are motivated to achieve improved performance as a result of training. The benefits employees gain is personal, career oriented and job related knowledge. The availability of training to the employees make them committed for achieving performance and develop strong relations with the organization and stay longer in the organization.

The manufacturing sector is people based industry where the end product is often produced by a number of employees together delivering the end product for organization and customers. Management of labor intensive industries face daunting task to measure the potential variability in the performance of the staff involved in the end product. Therefore the significance of appropriate training activities for all business within the manufacturing sector is of considerable importance. As training & development practices have the potential to increase the service levels in the industry, organizations want to work out cost and benefits of training and development.

Therefore the purpose of this study is to analyze the Training activities within Manufacturing companies, located in Ahmednagar District, identifying Training systems, its evaluation and its effectiveness on employees and organizations and their performance. To achieve this objective, the study has identified the literature and published studies as best practices in the area of training.

4.2 RELEVANCE OF STUDY

The share of manufacturing sector in the increasing of GDP of any country is noteworthy. It is important in a way that it is the sector providing maximum employment to the people, directly and indirectly. This sector has tremendous competition and faces challenges from the market. Advancement in the information technology, the increased use of computer aided designs and quick exchange information has made paradigm shift in the business being conducted. Segmented markets, greatly diversified customers have had great impact on the customer’s choice. Therefore to remain in the competition, it is assumed that the people in the organization play the essential role to build the organization. And to build the world-class organization, the HRD intervention, in the form of continuous training is required.
Literature on training & its impact is very rich in the form of many books and journals. But after going through many books and articles it was worth investigating whether the result of the efforts of training and its practices have been undertaken. It is also essential to note the training as process efficiency. There are number of organizations where this kind of support is not provided to the employees in spite of National policy that training has to be provided to the employees to increase their skill sets and to gain through the training strategies. The organizations now have understood the importance of providing the training to their employees so as to get the edge in the area of competition. There is now growing recognition that training has significant role in gaining competitive advantage. Extensive research undertaken within human resource area has found that majority of the organizations engaging in innovative practices include training as key element to attain best practices.

4.3 RESEARCH QUESTIONS

The research methodology was designed in order to test the following research questions:
1. To study if there is a difference in the weightage that HR managers attach to various Employee Training and Development Areas.
   \( H_1 \): The weightage given by HR managers to various Employee Training & Development Areas is different.
   A statistical analysis using a Freidman Chi Square test was conducted for this question.
2. To study the Impact of Training on Attitude, Confidence Level, Interpersonal Skills, Motivation Level, Teamwork & Level of Satisfaction of Employees’.
   \( H_1 \): Employee Training has a positive impact on Attitude, Confidence Level, Interpersonal Skills, Motivation Level, Teamwork & Level of Satisfaction of Employees’.
   A statistical analysis using Simple Regression Analysis was conducted for this question.
3. To study whether Training Objectives, Contents of Training Program & Equipments and Facilities have an impact on Effectiveness of Training.
   \( H_1 \): Training Objectives, Contents of Training Program & Equipments and Facilities have a positive impact on Effectiveness of Training.
   A statistical analysis using Step Wise Multiple Regression Analysis was conducted for this question.
4.4 RESEARCH APPROACH

Post Facto Research Methodology is used in this research. This mainly comprises of a descriptive style of investigation to find out effectiveness of training and its impact. The present research study is descriptive in nature and therefore, data is collected from both Primary and Secondary sources.

This research includes quantitative techniques where it gathers data in words and concepts (Punch, 2005). The respondents were asked to rate each statement according to their level of agreement with it by using a 5-point Likert scale (1: Strongly Disagree, 2: Disagree, 3: Neutral, 4: Agree, 5: Strongly Agree).

4.5 JUSTIFICATION FOR SELECTED RESEARCH METHODOLOGY

The quantitative research refers to systematic investigation through statistical, mathematical, or computational technique. The main objective of quantitative method is to create mathematical models, hypothesis or to build theories leading to phenomenon. This data is further processed with the help of SPSS. The output of is unbiased and the results can be generalize to larger population. The quantitative methods were used for hypothesis testing. Following are some of the advantages of this type

- Testing and Validation can be done on theories or phenomenon build.
- Hypothesis that is build can be tested before data collection.
- The results can be generalized to population.
- It is useful for obtaining data that allow quantitative predications.
- A data collection using quantitative method is relatively quick as compared to qualitative method.
- It provides precise, numerical data.
- Data analysis can be done quickly using SPSS.
- It is useful for studying large population.
4.6 AREA OF STUDY

The implications of this research cover selected large scale manufacturing companies from Ahmednagar District. The companies selected for this research are BSE listed, as they have proper organizational structure for various departments and well equipped Training & Development Cell.

4.7 SAMPLE SELECTION AND SAMPLE SIZE

Kerlinger (1986) states that sampling is portion of a target population or universe as a representative. According to Cohen et al (2007), a probability (random) sampling and non-probability (purposive) sampling are two main strategies for selecting research subjects. This research adopts a probable i.e. Random sampling. The companies selected in this research are Bombay Stock Exchange listed, as they have well equipped Training & Development cell. The list of manufacturing companies was obtained from Maratha Chamber of Commerce of Industry and Agriculture, Pune.

<table>
<thead>
<tr>
<th>SR. NO</th>
<th>INDUSTRIAL ZONE</th>
<th>NO. OF INDUSTRIES</th>
<th>COMPANIES SELECTED</th>
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</thead>
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<tr>
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<td>08</td>
</tr>
<tr>
<td>2</td>
<td>KARJAT</td>
<td>09</td>
<td>05</td>
</tr>
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<td>SHRIRAMPUR</td>
<td>08</td>
<td>04</td>
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<td>SANGAMNER</td>
<td>07</td>
<td>03</td>
</tr>
<tr>
<td></td>
<td>TOTAL</td>
<td>45</td>
<td>20</td>
</tr>
</tbody>
</table>

Table no. 4.1 Sampled Population (Large Scale Manufacturing Companies in Ahmednagar District)
4.8 DATA COLLECTION METHODS

4.8.1 Primary Data Collection Method

The researcher collected the primary data through Questionnaire.

4.8.2 Secondary Data Collection Method

The researcher collected the secondary data through research papers, reference book, newspaper articles, websites and journals.

4.8.3 Questionnaire

According to Zikmund (2003), questionnaire is the most simplest and effective research tool. They are cost effective and reduce data distortion from any other tool. As the questionnaire was of anonymous nature, it allowed the respondents in both vertical i.e. HR Managers of companies and the employees’ to deeply express their inner beliefs and perception about the Training provided and its Impact on their performance.

4.8.4 Mode of Questionnaire Development

Close ended questions were included in the questionnaire to determine the context of the research by asking general questions like age, sex, qualifications, designations, sustainability with the current organization. Multiple choice questions were equipped with 5 point Likert Scale so the respondents would indicate the intensity of their perception about the type of training provided to them and it impact on their performance. The likert scale had a range of options from strongly agree, agree, neutral, disagree to strongly disagree. This gave respondents the ability to make fine distinct (Dundas 2004).

The web based questionnaire was developed and self administered for the HR Managers who failed to give appointments for filling the manual questionnaire. Tourangeau (2004) reported that the responses to web based survey is less up to 20 to 30%, whereas Tarnai and Paxson (2004) estimated responses from corporate for web based survey varied to 50%. Internet security and spam are few potential factors which affect the response rate in web- based survey. Fowler (2002) profound that this lower rates negatively impact validity and affects
the ability to draw valid inferences from research sample to larger population. The web based survey has been found the most useful means of conducting the research to the population that use internet regularly. In this case HR from companies happen to be techno savvy. Web based survey instrument is more prevalent as earlier issues of internet access, uncertain technology, and sample representation, limited use earlier (Roster, Roger, Albaum, 2004). The personalization of email invitations to participate in web based survey increase the response rates (Heerwegh, 2005), so the researcher took several steps to identify the exact contact of each company to forward personalized email.

Human Resource Managers were contacted on the board numbers for the personal appointments to fill the manual if not then to get the email id so the personalized email was sent to them inviting them to fill the web based questionnaire. When got the appointments for personal visit in companies the researcher identified himself as PhD student, described the study and requested to fill the questionnaire assuring confidentiality of the information provided.

The HR Managers who agreed for web based survey were sent a personalized email to improve the response rate. The email that was mailed contained the short review of the study and a hyperlink to the URL containing the web based survey.

The response data was initially converted into excel sheet and was later converted to SPSS format, in which each dependent variable was converted to some numerical value.

4.8.5 Structure of The Questionnaire

The entire questionnaire is divided into 2 parts, a detailed copy of both questionnaires i.e. Questionnaire for Employees’ & Questionnaire for HR Managers of Companies is available in Annexure.

The questionnaire was discussed with Research Guide number of times to give it a proper shape and make it simpler and lucid to get the maximum information. A pilot testing of questionnaire was conducted in one of the organization to test the validity and reliability of the questionnaire.

(Annexure A) Comprised of the Questionnaire for Employees’. It had 50 questions spread over 13 parts which contained broadly personal information, training and development characteristics, training need identification, training objectives, contents of the course,
equipments & facilities, trainer qualities, Opportunities for application of training, benefits and effects of the training program, general comments, review of job satisfaction, review of performance and review of performance drivers post training. 10 Employees’ per company were selected and requested to fill up the questionnaire.

(Annexure B) Comprised of the Questionnaire recommended and filled from the HR Managers. This questionnaire was filled Pre and Post Training by HR Managers. The said questionnaire was also developed web based and self administered for the HR Managers who failed to give appointments for filling the manual questionnaire. The changes in opinion of HR Managers towards the selected attributes of Employees’ marked the Impact that Training created in their performance.

4.9 DATA ANALYSIS TECHNIQUES

Statistics tools are employed in this thesis to analyze the data collected. The quantitative data collected through questionnaire, as quantitative research involves measurement across the sample (Punch, 2005, p-109). SPSS (Statistical Package for Social Sciences) software is used to analyze the data. The interpretation of the data in this thesis is tested using SPSS tools such as Freidman Chi-Square Test, Simple Regression Analysis and Step Wise Multiple Regression Analysis.

4.10 SUMMING UP

The research methodology employed in the current study consists of quantitative approach. The respondents selected were from population of 20 Large Scale Manufacturing Companies spread over Entire Ahmednagar District.

The next chapter gives detailed analysis of the data collected from these employees of varied manufacturing companies. The chapter includes Data analysis and interpretation on application of training.
4.11 REFERENCES