

**ROLE AND CHALLENGES OF SKILL DEVELOPMENT FOR APPRENTICESHIP IN  
MANUFACTURING INDUSTRIES W.R.T. PUNE CITY**

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**ABSTRACT:**

Manufacturing industries is a general domain where lot of skills sets are required from the employees, trainees during the apprenticeship and their job tenure in their profession. This research paper is intended towards the identifying the role of skill development in apprenticeship in manufacturing industries from trainees and managers perspective. The present study compare the efficiency of trainees before and after skill development. This study is projected towards the growth of training provided to the apprentices and the further carrier opportunities. The present research is also intended to identify the trainings provided to the trainees and their effectiveness in their job roles and various aspects.

**Keywords:** Apprentice Training, Skill development, Competencies, Digital Transformation.

**INTRODUCTION**

The manufacturing sector has a significant demand for skill-based training, and on-the-job training is the best option for talent. An apprenticeship or internship has been a staple step for the ones starting their expert careers, no matter the field. While employers gain due to the fact apprentices paintings at lesser cost, the apprentices advantage the much-wished hands-on enjoy at the roles they choice to keep within side the future. Hiring apprentices has been a not unusual place exercise for a while now in maximum industries, and the fashion keeps to develop in India.

One of the most effective ways to ensure a constant flow of qualified and job-ready workers for all industries, including manufacturing and engineering, and to lessen their complicated workforce difficulties, is through apprenticeship programme. It is gradually gaining more acceptance and recognition among Indian employers as a viable and satisfying skill-up gradation and career-enhancement programme to guide the next generation toward a brighter future in specialized fields and as a tried-and-true method for attracting, developing, and retaining top manufacturing talent.

**OBJECTIVES AND HYPOTHESIS OF THE STUDY**

**Objectives:**

1. To evaluate the various components & present Scenario of Apprenticeship training for skill development in Manufacturing Sector.
2. To identify the factors that influence the implementation of Apprenticeship training in improving the skill development
3. To study the opinion of industry representative, skill training partner & Students in regard to the role of Apprenticeship training for skill development.

**Hypothesis:**

**H<sub>1</sub>:** There is significant difference between Training provided to trainees and taking them on roll of organization.

**H<sub>0</sub>:** There is no any significant difference between Training provided to trainees and taking them on roll of organization.

**RESEARCH DESIGN**

Table No. 1: Data Sources and Techniques used for the Present Study

Particulars	Methods/Techniques
For Statistical Analysis	

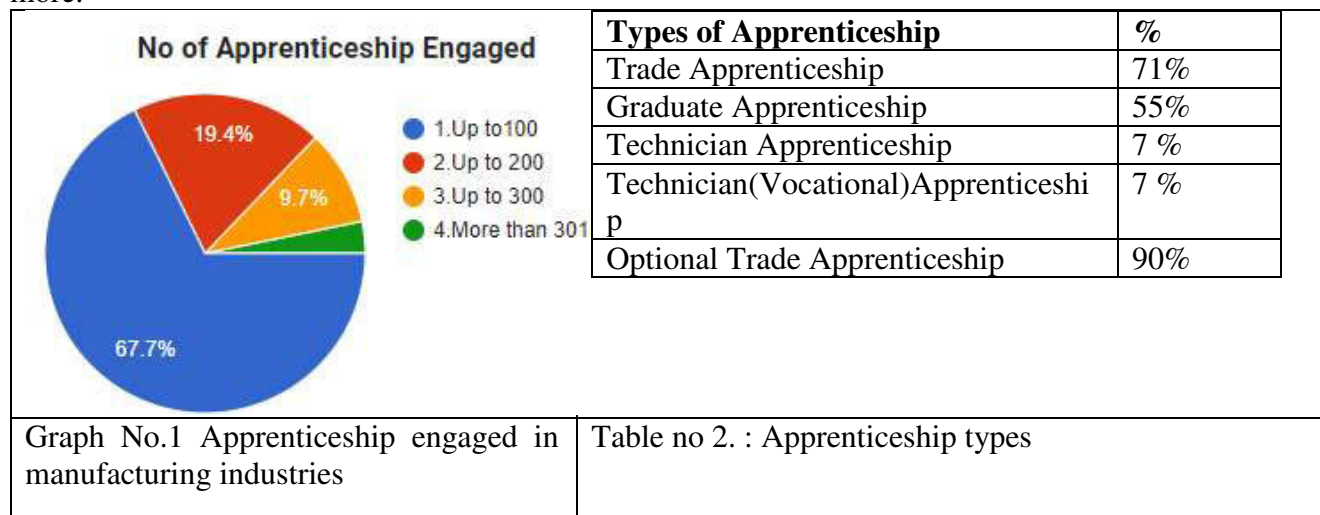
Technique for Diseases Selection	Interview	Formal and Informal Discussions	Questionnaire	Observations
Data Sources	Manufacturing Industries from Pune City			
Data collection	Primary and Secondary			
Sampling Technique	Simple Random Sampling Method			
Data Analysis Tool	SPSS: Statistical Package for the Social Sciences			
Types of Research	Exploratory			

Source: Compiled by Researcher

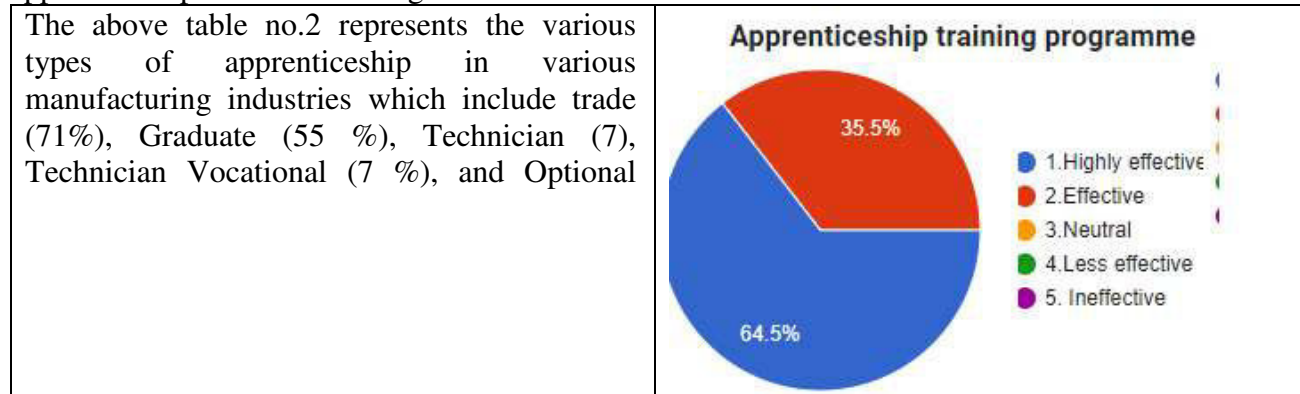
### DATA ANALYSIS

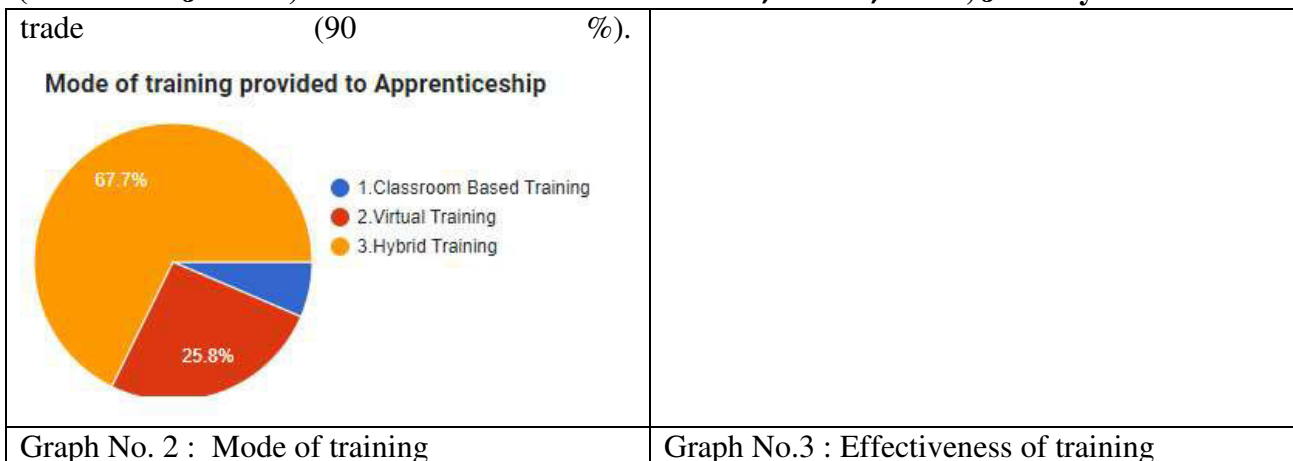
The data is collected from the various manufacturing industries from Pune city through structured questionnaire from trainees and managers to understand the role of skill development in their apprenticeship and effectiveness in their day to day work.

The manufacturing industries considered are from Electronics, Aerospace components , electric car product , Drive assembly , Sinter metal , Chloride products , Seat manufacturing , Wiper Manufacturing, Pharm Product, Textile, break manufacturing, Plastic, Battery Assembly and many more.



The graph no.1 depicts about the no. of apprenticeship engaged in manufacturing industries; it represents approximate 67.7 % trainees are there up to 100 , 19.4 % are up to 200 , 9.7 % up to 300 and 2.7 % more than 301.It has resulted that approximate 68 % of trainees are engaged in apprenticeship in manufacturing industries.





The mode of training provided during the apprenticeship is 67/7 % for hybrid training, 25.8 % for virtual training and 6.5 % class room based training.

The above table depicts about the effectiveness of training programme for skill development during the apprenticeship, it represents that approximate 65 % of managers says that it is highly effective and 35 % are says that it is effective.

The managers from all manufacturing industries results that the trainees completing the apprenticeship programme gets easy employment opportunities. It has been resulted that 33.3. % are agree and 67.7 % are highly agree for the same.

Table no 3: Exposure of technology or Machine system

Use of technology	Response (%)
Always	75
Often	8.3
Some time	16.7

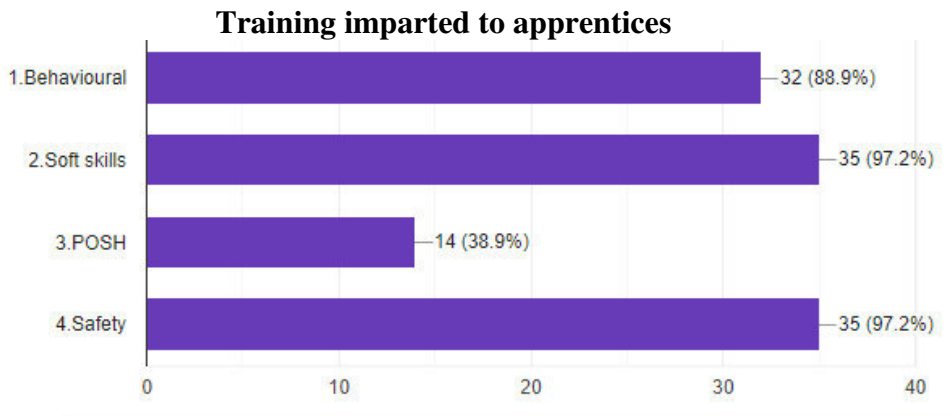
The table no 3. depicts about the latest use of technology or machine systems exposure to the trainees/apprentices is provided by the industries. It shows industries provide 75% of latest technologies/ machines to trainees while as 8.3 % industries provide often and 16.7 % of industries provides some times the latest technology and machine systems.

The following figure represents about the information about the taking apprentices on role or payroll after completion of apprenticeship training.

Table no 4: On roll apprentices after training opportunity

Apprentices absorbed on roll	(%)
NO	5.6
0 % to 10 %	42.2
10 % to 20 %	44.4
20 % to 30 %	2.8

It has observed that, almost 10 % of manufacturing industries takes apprentices on their roll after completion of their training while as 10 to 20 % of industries takes 44.4% of apprentices and 20 to 30 % of industries takes 2.8 % of trainees on their roll. 5.6% of apprentices are not considered on the roll of industries. It has concluded that, most of the manufacturing industries takes the apprentices trainees on their roll after completion of their training.



Graph no 4: Types of trainings

The above figure no.4 represents the details about the various kinds of trainings imparted to the apprentices during their training period. It has been observed that 32 manufacturing industries provides behavioral training , 35 provided soft skill , 38.9 % provides POSH and 35 industries provides safety oriented trainings.

Career Opportunities	Percentage
Promotion	30
Salary	27
Permanent Employment	22
Efficiency	1

Table no 5 : Career Opportunities

Apprentices are having different career opportunities after taking on roll namely promotion, salary, making them permanent, efficient employee etc. It has resulted that 30 % of industries are providing promotion, 27 % are increasing salaries, 22 are making them permanent and 1 % are making them efficient for work.

There are different challenges faced by various manufacturing industries during the implementation of training programme as hectic employee schedule, budget constraint, feedback & support system, Ineffective training method, student’s interest and availability of qualified trainers.

### Hypothesis Testing

**H<sub>1</sub>:** There is significant difference between Training provided to trainees and taking them on roll of organization.

**H<sub>0</sub>:** There is no any significant difference between Training provided to trainees and taking them on roll of organization.

Calculation of T Test	Mode of training to Apprentices	Taking Apprentices on roll/payroll after training
Mean	1.3333	2.4
Variance	0.2889	0.3733
Stand. Dev.	0.5375	0.611
n	30	30
t	-8.0341	
d.o.f	29	
critical value	1.699	

Table no 6 : two tailed paired t - test details (Source: Online t test calculator)

The t-value is -8.0341, if the p-value is < .00001. The result is significant at  $p < .05$ .

If  $p < 0.05$  then null hypothesis is rejected.

Hence null hypothesis is rejected and alternate hypothesis is accepted. Therefore it has resulted that Providing Training trainees/apprentices is useful for taking them on roll of organization.

## FINDINGS AND SUGGESTIONS

- 68 % of trainees are engaged in apprenticeship in manufacturing industries.
- Approximate 90 % of trainees are engaged in optional trade apprenticeship.
- Approximate 68 % of apprenticeship training is provided through hybrid mode to the trainees from the manufacturing industries.
- Almost all managers from manufacturing industries utters that apprenticeship training programme are effective for skill development of trainees
- Almost all managers from various manufacturing industries utters that the trainee completing the apprenticeship programme gets easy employment opportunities
- 75 % of manufacturing industries gives exposure of latest technologies and new machines and systems to apprentices during their training period
- 86 % of manufacturing industries takes the apprentices trainees on their roll after completion of their training
- Manufacturing industries provides various training to their apprentice like Behavioral training, safety, POSH as well as Safety
- Industries are providing career opportunities after taking the apprentices on roll in the form of promotion, salary increase and making them permanent.

## CONCLUSION

The apprenticeship programme is a fantastic way to build skills while benefiting the industry and young people who are unemployed and in their first jobs. The study centered on various manufacturing industries. The research has determined that the apprenticeship training in hybrid mode is worked by the industries and it is effective approach of skill development of apprentices. The organizations also provides the exposure of latest technologies , new systems and machines to trainees as well as based on their skill they take the apprentices on their roll and provides various types of skill for the development and making them efficient.

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