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**Empirical Study on Competency Mapping with Special Reference to Employees of Foundry Companies at Belgaum District****Maheshgouda B Patil<sup>1</sup>****SHIVASHANKAR K<sup>2</sup>**

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**Abstract**

Every individual has competency as an underlying characteristic which has related influence on the performance in different situations and also on performing various jobs effectively and efficiently. Competency: A person related concept that refers to the dimension of behavior lying behind competent performer (R. Yuvaraj, 2011). The current study has made an attempt at understanding the factors that compute competency mapping and opinions of frontline employees working in foundry industry at Belgaum city towards these factors. The study also makes an attempt at assessing the influence of competency mapping on the performance of the organization. The current study gives scope for model development considering competency mapping parameters and related performances considering foundry industries. Based on the study it was interpreted that there is an association between competency mapping and performance.

**Keywords:** Competency Mapping, Foundry Companies, Skill development, Performance parameters.

**Introduction**

Competency mapping enables the monitoring of performance and development of human resource at the organization, making it a strategic and systematic approach enhancing performance. Competency mapping is a generic term and is very much related to human psychology and behavior. It is also associated with being qualified with adequate quality, being able emotionally and intellectually stable. Therefore one can arrive at a stance that competency has to do with the capability of being able. The department of human resource management is always buffeted with challenges of up-scaling the competency of employees or potential employees at the organization. In order to cater these challenges competency mapping parameters help the human resource management as a facilitator in performing psychological tests. Competency mapping always makes an attempt at addressing the questions like 'when and where', and not 'how much'. Which means that Competency mapping considers performance enhancement in terms of quality of work and is not skewed towards quantity (Ahmed & Alsabri, 2015).

Competency mapping is not a complicated term if facilitated through a systematic and scientific manner. The current business environment is very challenging and as a result, various business leaders are constantly putting efforts to understand the competencies required to address uncertainties or to ensure sustainability. As Competency mapping has to do with monitoring and developing the performance of human resource in an organization, it is inevitable to have a strategic competency

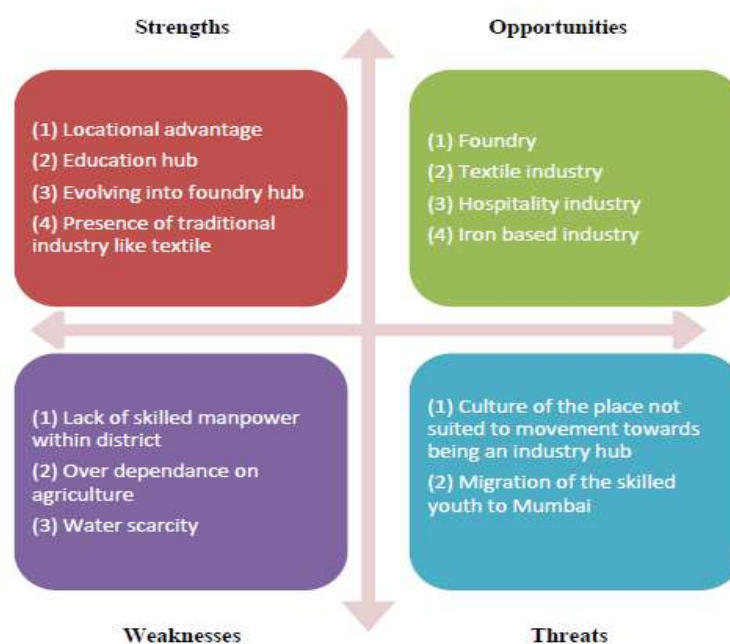
mapping framework. The manufacturing sector in India has come through a long way and is predicted that it has a huge scope filled days to come. But Indian manufacturing sector will be in need of quality human resource skills and performance enhanced framework is predominant which will be facilitated by Competency mapping (Jain, 2013).

Belgaum district has raised eyebrows of manufacturing sector when it comes to foundry industries. Belgaum district has currently about 33 large and medium scale industrial units which are providing employment opportunities to about 33,000 people as per a report by “Karnataka state industrial profile 2015-16”. These included organizations mainly in the genre of sugar mills, foundry and ironwork, and textile. Belgaum also has 33,707 Small Scale Industries (SSIs), employing about 1.38 lakh persons. As of March 2015, the majority of these units were textile, job works units, food and intoxicants, and tree-based. Refer to annexures for details. The district has five industrial areas, totaling 739 acres of land. For details, refer to annexures (National Skill Development Corporation, 2013).

National Skill Development Corporation (NSDC) has forecasted an incremental growth in supply and demand of human resource management. It was estimated that between the period of 2012 to 2022 an incremental demand for employment of 4.53 lakh workforce is likely to arise in Belgaum district. The major source of employment will be facilitated by agriculture and its allied activities having the advantage of one of the most productive districts of Karnataka in agriculture. As the economy grows, employment demand in supporting sectors such as construction, transportation, healthcare, and education is also expected to increase at a faster rate. In spite of these factors, other unique sectors for employment creation are textile and clothing, hospitality, foundry, and sugar processing units. On the contrary, there is a huge demand for skill development in these sectors put together (Rao, R. Raghuttama, 2017).

Figure 1

Figure 48: SWOT Analysis of Belgaum district

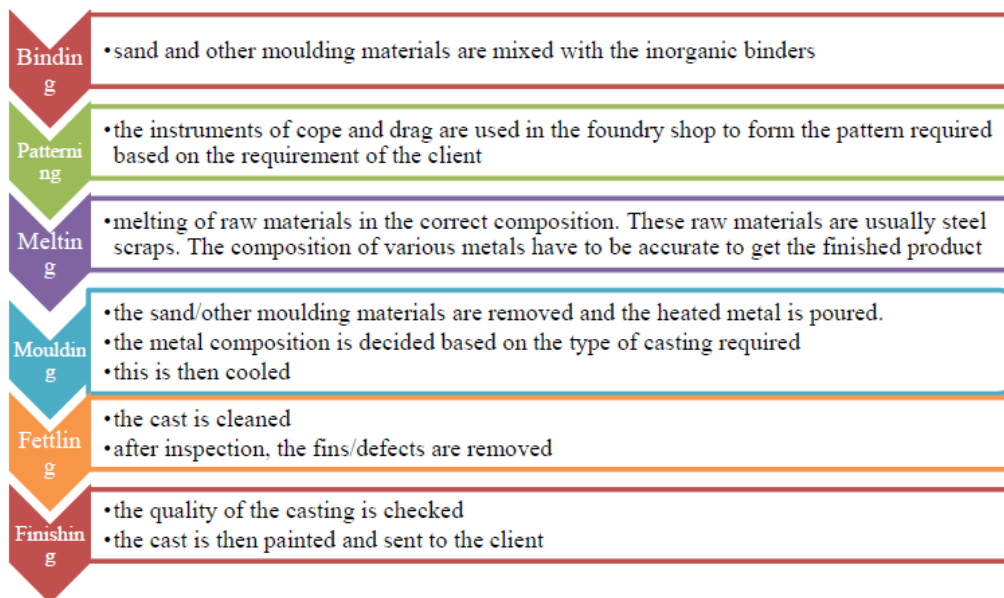


Source: (National Skill Development Corporation, 2013)

A foundry is a factory that (“Definition 1,” 2016) produces metal castings. Metals are cast into shapes by melting them into a liquid, pouring the metal in a mold, and removing the mold material or casting after the metal has solidified as it cools. The most common metals processed are aluminum and cast iron. However, other metals, such as bronze, brass, steel, magnesium, and zinc, are also used to produce castings in foundries. In this process, parts of desired shapes and sizes can be formed. Foundry came into Belgaum about 50 years back. At present, there are more than 115 foundry industries in Belgaum district. These industries are engaged in the manufacture of grey iron and CI castings. The units are also manufacturing components of sugar mills, textile machinery, cement industries, automobile industries etc. The units which were using the cupola type of furnace have started using the induction furnaces from 1990 onwards (Hi, 192AD).

Figure 2

Value Chain of Foundry Industry



Source: (Rao, R. Raghuttama, 2017)

### Problem Statement

Karnataka as a state has made its mark as “Science Capital” of India as it has more than 100 research and development centers and is also a preferred destination for Multi-National Companies. The states per capita income is about Rs 72 thousand which is above the national average of Rs 64 thousand. Belgaum district is a second largest contributor to the GDP of Karnataka ie it contributes to about Rs 16.5 thousand Crores. However, foundry industries at Belgaum, contribute to the major source of employment and revenue but are evolved with multiple challenges hampering its sustainability. Foundry industries are buffeted with impediments like: Inability to adapt to the latest technology used in shop floor, Lack of knowledge about various metals and composition to be mixed for melting, Lack the discipline to come and put in the required hours of work, Inability to produce quality work consistently, Lack of knowledge about the machines, Inability to perform work as per the instructions at first instance (National Skill Development Corporation, 2013).

### Objectives of the Study

- 1) To identify the various factors of competency mapping and to assess the influence of demographic variables on these factors.
- 2) To explore the various performance parameters constituting to foundry industries and assess their relation towards factors of competency mapping

### Hypothesis for the Study

H1a: There is association between education qualification of employees at workplace and factors of Competency Mapping

H1b: There is association between length of service of employees at workplace and factors of Competency Mapping

H2a: There is relationship between factors of competency mapping and various performances Parameters constituting to foundry industries

### Research Methodology

The research is empirical in nature as primary data was captured through scheduling technique with the help of a structured questionnaire. The items for the questionnaire with respect to the parameters for competency mapping and performance were derived thorough review of the literature. The sample size selected for the study was 100 sampling units as front-line employees of foundry industries at Belgaum city. In order to assess the association between demographic variables and factors of competency mapping data was computed using Chi-square test. Further, the relationship between competency mapping as independent variable and performance parameters as dependent variable, data was examined using Pearson's correlation test.

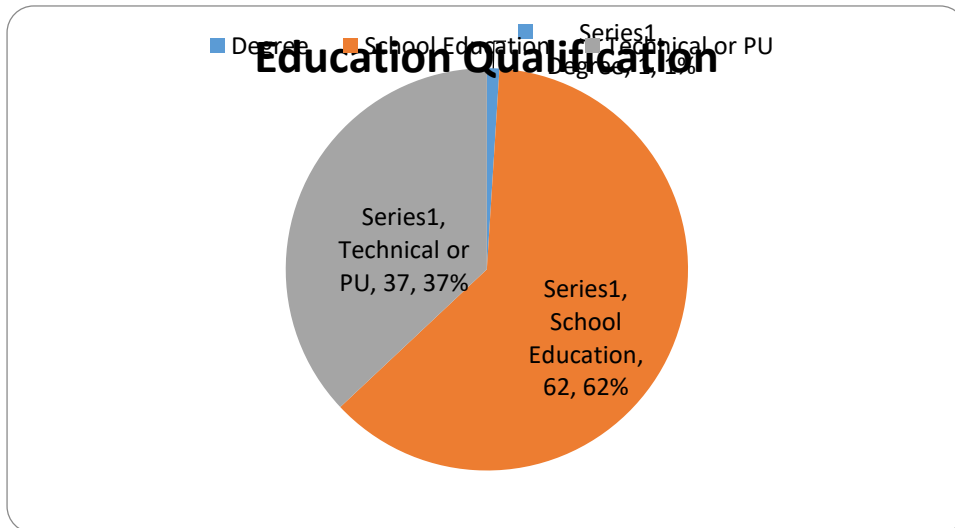
### Profile of Respondents

The study considers respondents as the front line employees of foundry industry at Belgaum locality. The employees perform various works like Pouring, Shakeout, Degating, Heat treating, Surface cleaning and grinding. They are entitled to report their supervisors, managers or in some instances to their employers. Their performance is gaged bases the productivity, waste reduction, time sense, and commitment at the workplace.

**Data Analysis**

**A) Descriptive Statistics**

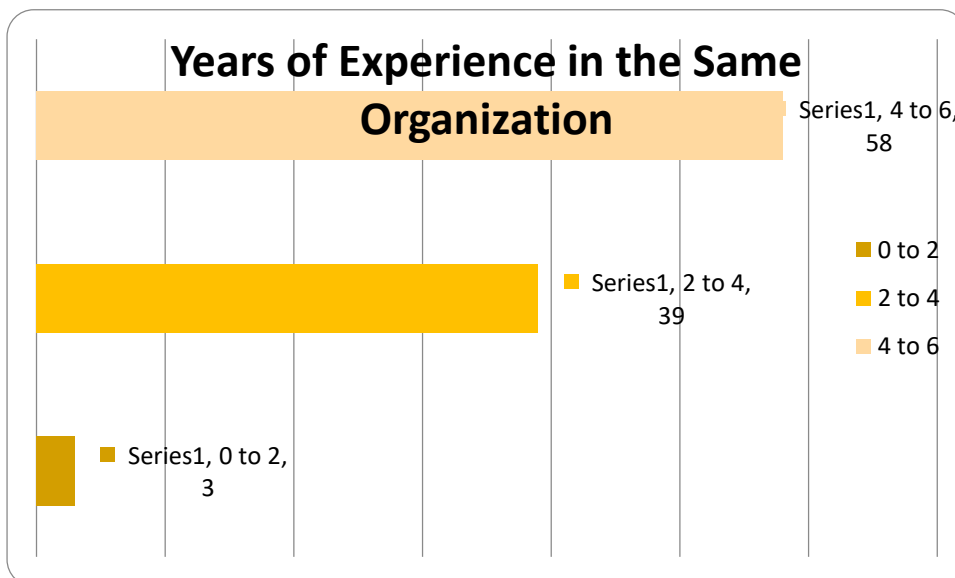
**Chart 1**



**Source: Data collected through questionnaire during field survey**

The above chart reflects that 62 respondents have qualification of school education, 37 have Technical or PUC education and only one has a qualification of Degree level education

**Chart 2**



**Source: Data collected through questionnaire during field survey**

The above chart reflects that 58 respondents have four to six years of experience in the same organization followed by 39 between two to four and 3 between zero to two

**A) Inferential Statistics**

**Result of Chi-Square test on Education Qualification and Competency Mapping**

**Table 1**

	Education Qualification	Competency Mapping
Chi-Square	56.420 <sup>a</sup>	140.000 <sup>b</sup>
Df	2	4
Asymp. Sig.	.000	.000

**Source: Data interpreted bases data collected through questionnaire during fieldwork**

**Interpretation:** The Chi-Square statistical p-value is highly significant and is < .05. Therefore we reject the null hypothesis and interpret that there is an association between Education qualification and parameters of competency mapping.

**Result of Chi-Square test on Years of Experience in the Same Organization and Competency Mapping**

**Table 2**

	Years of Experience	Competency Mapping
Chi-Square	46.820a	140.000b
Df	2	4
Asymp. Sig.	.000	.000

**Source: Data interpreted bases data collected through questionnaire during fieldwork**

**Interpretation:** The Chi-Square statistical p-value is highly significant and is < .05. Therefore we reject the null hypothesis and interpret that there is an association between Years of Experience in the Same Organization and parameters of competency mapping.

**Analysis of Correlation between Competency Mapping and Performance Parameters**

**Table 3**

		Competency Mapping	Performance Parameters
Competency Mapping	Pearson Correlation	1	.811**
	Sig. (2-tailed)		.000
	N	100	100
Performance Parameters	Pearson Correlation	.811**	1
	Sig. (2-tailed)	.000	
	N	100	100

\*\* . Correlation is significant at the 0.01 level (2-tailed).

**Source: Data interpreted bases data collected through questionnaire during fieldwork**

**Interpretation:** The analysis of correlation shows that the p-value is highly significant statistically and there is a strong relationship between the factors of competency mapping and various performances parameters constituting to foundry industries. From this, we can interpret that application of strong competency mapping practices at the foundry industries of Belgaum will result in long-term performance of the organization

### **Findings and Suggestions**

- From the study, it was found that the education qualification of front-line employees of foundry industries at Belgaum city is considerably low. This can be a result of the increased levels of experienced workers at the organization ie 58 respondents are serving for more than 4 years.
- The demographic factors like the education qualification and years of experience in the industry have an association with the factors of competency mapping which is a good insight as the need for competency mapping is clearly perceived by the employees and its significance is been considered.
- Competency mapping consideration in the organization will influence the performance of the organization in terms of Enables in enhancing commitment towards work, Influences in effective time management, Results in increasing productivity, Facilitates in reducing wastes at workplace, Creates healthy environment for workplace and reduces attrition rate, Facilitates in teamwork and Reduces pressure on attainment of targets.
- Foundry industries at Belgaum city are providing better workplace and are surely creating employment opportunities in the region but in the advent of cut-throat competition, the focus is skewed towards enhancing productivity surpassing the human resources upliftment. So, it is inevitable for the industry to practice more structured practices considering employee and employer sustainability.
- In the era of Technological revolution wherein artificial intelligence, big data analysis and machine learning have constantly created buzz in the current scenario the industry needs a quick check on the need of the hour. It can surely result in distress if the industry fails to overcome the traditional concept of production.

### **Conclusion**

The present study has made an attempt in assessing the opinions of front level employees of foundry companies at Belgaum city and it is clearly visible that there is a need for a structured and formal approach required towards long-term sustainability of the sector in order to withstand the global competition. The research provides scope in conducting the study at a broader perspective with larger sample base and also provides scope for study considering supervisors, employers as sampling units.

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