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## MAPPING OF EMPLOYEES SKILLS AND COMPETENCIES AT M/S.DIESEL MACHINERY WORKS

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**Abstract:**-Competency mapping is a strategic HR framework for monitoring the performance and development of human resource in organizations. At the heart of any successful activity lies a competency or skill. Over the years, highly skilled and knowledge based jobs are increasing while low skilled jobs are decreasing. In the recent years, various thought leaders in business strategy have emphasized the need to identify what competencies a business needs, in order to compete in a specific environment. This project explains the need of competency mapping and the ways to measure it.

This paper emphasis the competency mapping of employees by analyzing the gap between the levels of competency the job expects and the level of competency the employee possess. The gap identified will help the employees to focus and build on the lacking competency by which the organization can achieve its objectives. For the study purpose, the data was collected from conveniently selected 100 employees of Diesel Machine Works. An in depth descriptive study was made. Weighted Average method used to rank the employee skills and jobs expectations. Radar Chart was used to identify the skill gap of employees.

**Keywords:**Competency Mapping, Employee skills, Competencies, Skill gap.

### 1. INTRODUCTION

In the modern world, the business managers are required to improve the efficiency and effectiveness of the business operations. As there are several factors that affect efficiency and effectiveness of operations, the improvement is required to be carried out in every factor.

Every person has different qualities, attitudes, motives, personality traits, skills, knowledge etc. which has effect on their performance at work. Organization, in order to facilitate excellence in the performance of people in the organization, they are required to identify the right person to the right job. This matching between jobs and people is an important avenue for organization efforts. The current globalization of economy necessitates innovative approaches in managing the work force. One of the most commonly used HR practice is competency mapping. Identifying and developing the employees competencies enable better performance thereby leading to successful career and succession planning.

Competency mapping is an essential exercise. Every well managed firm should have well defined roles and list of competencies required to perform each role effectively. Such list should be used for recruitment, performance management, promotions, placement and training needs identification. They may need to hire someone who can be an effective time leader or who has demonstrated great active listening skills. When individuals must seek new jobs, knowing one's competencies can give one a competitive edge in the job market. The competency mapping research is conducted in Diesel Machine Works (DMW), an Original Equipment Manufacturing (OEM) with an intention to measure how the employees and the executive management can be effectively engaged in their work according to their individual competencies. It also helps to determine the driving force of an organization for sustainable growth.

**P. Karthikeyan<sup>1</sup>, N. Gayathri<sup>2</sup> and T. Dheepa<sup>1</sup>, "MAPPING OF EMPLOYEES SKILLS AND COMPETENCIES AT M/S.DIESEL MACHINERY WORKS", Golden Research Thoughts | Volume 4 | Issue 7 | Jan 2015 | Online & Print**

## 2.LITERATURE REVIEW

Jaideep Kaur and Vikas Kumar (2013) studied the competencies of managers from three different levels of management with a questionnaire and gap was analyzed. It was concluded that the manager in higher level lacked in technical skills compared to middle level manager. Planning skills and leadership skill were missing in middle and first level. Dr. M. Daniel Solomon (2013) studied the level of competency prevailing among 308 executives in the public sector selected using Stratified Proportionate Random Sampling. It was found that nearly half of the respondents have moderate level of overall managerial competency, HR Competency and general competency. K.Rajesh Kumar and Dr.R.Karuppasamy (2013) identified the deficiencies in required competencies among 500 employees working in hotels of Madurai. He concluded that employee have high level of competency in knowledge of products & services, understand customer's feelings, effective communication, persuading skills & dealing with all types of customers. Vikram singh chouhan and Sandeep srivastava (2013) concluded that with the knowledge and use of the information contained within a competency model and awareness of their individual competency strengths and weaknesses, individuals may manage their future job or career success, navigate their current chosen career pathway, or apply the information to examine new career opportunities, considering the utilization of transferable competencies.

J. Krishnaveni (2013) assessed the competency of the employees of Meenakshi Mission Hospital and Research Centre, Madurai on the aspects of mutual relationship, communication, adaptability, leadership and overall task proficiency. It was found that the competencies possessed by the respondents are enough competent to do their job. But the respondents' leadership skills and communication are found to be moderate. The employees experience has significantly improved their adaptability. D.Maria Pon Rekha and K. Karpagavalli (2013) focused on competency mapping of the employees in order to identify what competencies the job expect and the competency possessed by the employees. It was found that for the dimensions high energy, numerical interpretation, analytical skill and creativity the expected level is more than the present competency level.

S.V.Sreedevi (2013) studied the existing competency level of the Pharma employees on six behavioural segments namely, Action Oriented, Adaptability, Building Trust, Client Focus, Innovation, Quality Orientation. It was found that the gap in the competencies is negative and stress tolerance level of the employees was less. Dr. Shilpa varma and Sunil V. Surte (2013) studied how competency mapping facilitates and enables an enhancement of the Competence Quotient of employees. The study emphasized that the presence of the right combination of competencies in an individual is imperative for attaining a high Competence Quotient in work performance.

## 3.METHODOLOGY

### 3.1. NEED FOR THE STUDY

The problem is that there exist a gap between the level of competency expected for a job and the competency level possessed by the individuals to perform on the current job. Competence mapping should focus more on what the organizations as a whole can manage than looking at the each individual worker has. But of course, we need to start with each individual, to fulfil that each individual has the wanted formal knowledge and the necessary skills and know-how to do a good job for the company. Research indicates that the closer the employer job competency expectations and the required competency level to the actual job brings the better chance for productivity improvement, waste elimination, multi skill development and overall job satisfaction. The best way to understand performance is to observe what people actually do to be successful rather than relying on assumptions pertaining to trait and intelligence. The best way to measure and predict performance is to assess whether people have key competencies. Competencies can be learnt and developed. They should be made visible/accessible. They should be linked to meaningful life outcomes that describe how people should perform in the real world.

### 3.2. OBJECTIVES OF THE STUDY

- To study on the employee skills and competency mapping at M/S Diesel Machinery Works, Perundurai, Erode
- To find out the gap between existing competency level and required competency level of employees at DMW, Perundurai, Erode
- To measure the gap analysis of each employee in terms of various factors such as adaptability, stress tolerance, punctuality, communication skill etc.
- To develop the skill mapping model using Radar chart that helps in measuring the employee skill in the organization.

### 3.3. RESEARCH FRAMEWORK

In this context, the present study was undertaken with the main aim of finding out the gap that exists between the level of competency that the job expects and the competency that the employees possess. The universe consists of 300 employees working in DMW unit and one-third of the employee was taken as a sample using quota sampling. The questionnaire contains certain items to assess the level of competencies that the workforce required to perform a certain set of activities as the job expects. The questionnaire contains items pertaining to measurement of job competency, personal competency, knowledge competency and interpersonal competency. Also it measures the various skill like communication, punctual, problem solving, technical, analytical, decision making, leadership, learning, creative, logical, interpersonal, negotiation, morality and integrity. Weighted average score was used to identify the employee competencies and measure employee skill. Finally a radar chart was drawn to graphically show the size of the gaps among the identified performance areas.

### 4. ANALYSIS AND RESULTS

**Table.1: Demographic Profile of the Employees**

S.No.	Demographic Variables		Percent
1.	Designation	Operator	58.0
		Operator Trainee	19.0
		Senior Operator	23.0
2.	Age	Below 25 years	54.0
		26-40 years	30.0
		41-50 years	11.0
		Above 50 years	5.0
3.	Marital Status	Single	59.0
		Married	41.0
4.	Experience	Below 2 years	46.0
		2-6 years	19.0
		6-9 years	19.0
		Above 9 years	16.0
5.	Education	Higher Secondary	33.0
		Diploma	25.0
		Under Graduation	13.0
		Post Graduation	9.0
		Others	20.0
6.	Monthly Income	Below Rs.8000	60.0
		Rs.8000-15000	24.0
		Rs.15000-20000	11.0
		Above Rs.20000	5.0

Of the selected respondents, 58% of the employees are operator cadre falling under the age category of below 25 years. 46 percent of the employees are having less than 2 years of experience and most of the employees are qualified with higher secondary or diploma. 60 percent of the respondents are earning below Rs.8000 since they have minimum years of experience and less qualification

From the table 2, the process of identifying the employee's competencies, it was found that the respondents accept that they posses high level of competency in adapting to work environment, facing challenges in work, understanding the quality standards, organization vision & mission, outcome of their work and problem solving capabilities. Also the respondents agree that they have low competency in dealing with complexity, open nature of accepting mistakes, managing stress and enjoy working as team.

**Table. 2: Weighted Average for Identifying the Employee Competencies**

S.No	Competencies	Weighted average	Rank
1.	I can adapt myself to changing work environment	4.15	1
2.	I can manage my work stress	3.69	12
3.	I can work with limited assistance	3.87	7
4.	I understand organization vision and mission	3.94	4
5.	I understand quality standards of my work or task	3.97	3
6.	Knowledge of material & tools used	3.89	6
7.	I know product or result of my work and specification	3.9	5
8.	I can work to create practical solutions to problem	3.9	5
9.	I can produce sound conclusions and recommendations	3.84	9
10.	I can face the challenging problems	3.98	2
11.	I can consider expert opinion to perform job effectively	3.85	8
12.	I can deal with complex information	3.53	14
13.	I can seek information to maintain current knowledge	3.87	7
14.	I am learning new things each time	3.76	10
15.	I always work with positive attitude	3.89	6
16.	I enjoy my work in groups or team	3.7	11
17.	I myself open to correct my mistake	3.68	13

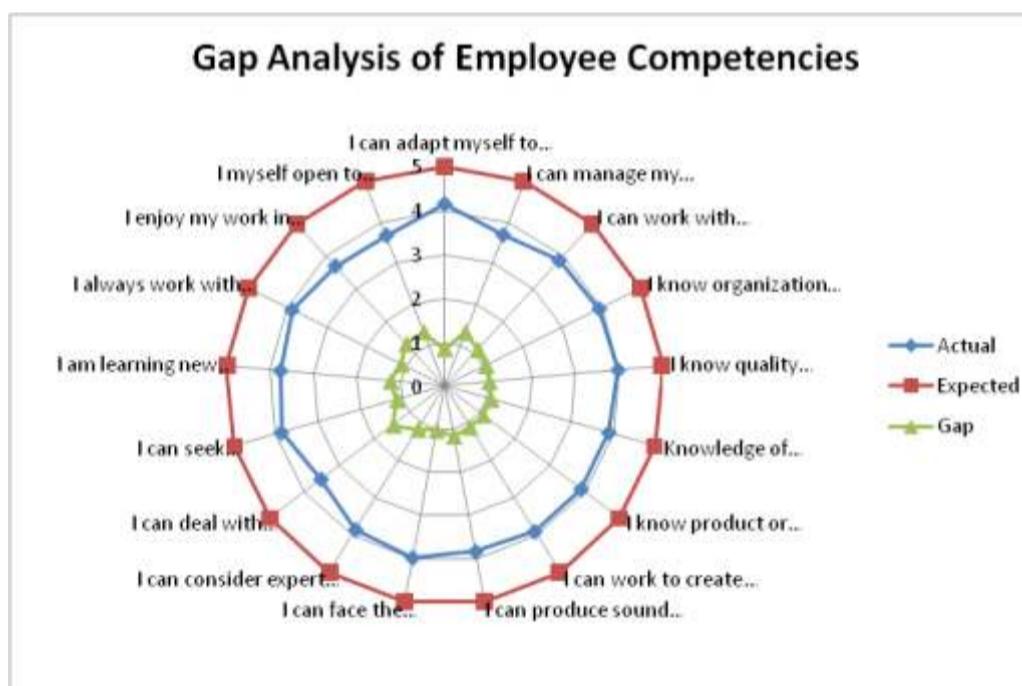
The table 3 explains the measuring the skill set of the employees. It was found that most of the respondents have agreed that they posses high logical thinking, interpersonal skill, negotiation skill and communicative skills. Whereas the respondents feel that they posses low competency in terms of decision making, analytical and technical skills.

**Table.3: Weighted Average for Measuring the Employee's Present Skills**

S.No	Skills	Weighted Average	Rank
1.	Communication skill	4.09	4
2.	Punctuality	3.82	8
3.	Problem solving	3.81	9
4.	Technical knowledge	3.71	10
5.	Analytical skill	3.67	11
6.	Decision making skill	2.89	12
7.	Leadership skill	3.91	5
8.	Learning well	3.83	7
9.	Creative thinking skill	3.88	6
10.	Logical thinking skill	4.32	1
11.	Interpersonal skill	4.31	2
12.	Negotiation	4.22	3
13.	Morality & Integrity	3.7	9

**Table.4: Gap Analysis of Employee Competencies**

Competencies	Actual	Expected	Gap
I can adapt myself to changing work environment	4.15	5	0.85
I can manage my work stress	3.69	5	1.31
I can work with limited assistance	3.87	5	1.13
I know organization vision and mission	3.94	5	1.06
I know quality standards of my work or task	3.97	5	1.03
Knowledge of material & tools used	3.89	5	1.11
I know product or result of my work and specification	3.9	5	1.1
I can work to create practical solutions to problem	3.9	5	1.1
I can produce sound conclusions and recommendations	3.84	5	1.16
I can face the challenging problems	3.98	5	1.02
I can consider expert opinion to perform job effectively	3.85	5	1.15
I can deal with complex information	3.53	5	1.47
I can seek information to maintain current knowledge	3.87	5	1.13
I am learning new things each time	3.76	5	1.24
I always work with positive attitude	3.89	5	1.11
I enjoy my work in groups or team	3.7	5	1.3
I myself open to correct my mistake	3.68	5	1.32

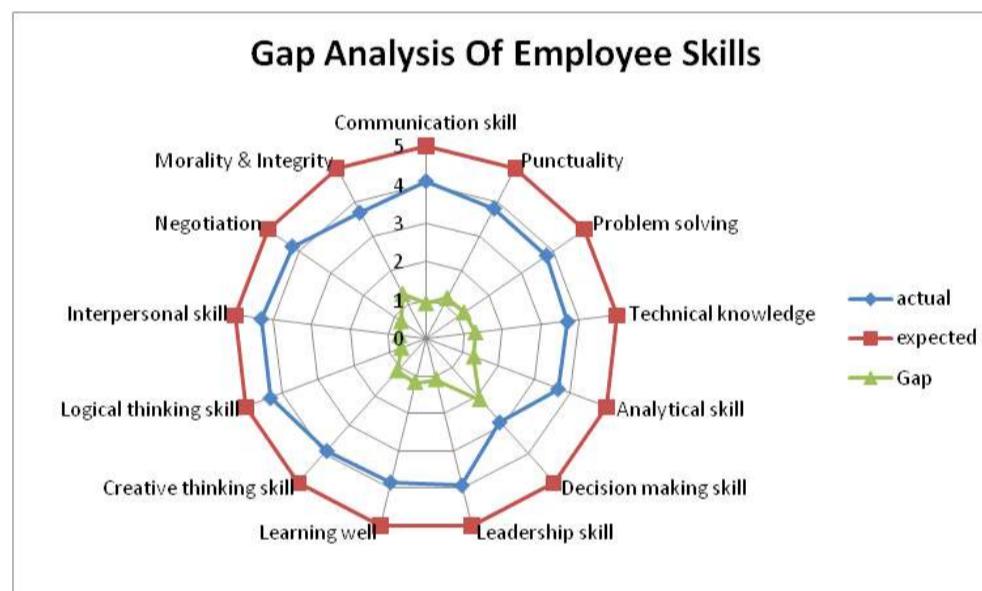


**Figure 1: Radar Diagram – Gap analysis Of Employee Competencies**

From the above Radar Chart, it is clear that the gap is spread more or less equally in all dimensions of competencies. Specifically if we refer the above table the competency gap is found to be higher in dealing with complex information, whereas little higher is found in stress tolerance and openness to correct mistakes. The low gap exists for seeking information to maintain knowledge, learning new things, work with positive attitude, enjoyment in groups or team, adaptability, limited assistance, understanding organization vision and mission, work specification, quality standard of work task, knowledge of materials and tools used, creating practical solutions to solve the problem, producing sound conclusion and recommendation, face challenging problems and performing job effectively.

**Table 5: Gap Analysis of Employee Skills**

Skills	Actual	Expected	Gap
Communication skill	4.09	5	0.91
Punctuality	3.82	5	1.18
Problem solving	3.81	5	1.19
Technical knowledge	3.71	5	1.29
Analytical skill	3.67	5	1.33
Decision making skill	2.89	5	2.11
Leadership skill	3.91	5	1.09
Learning well	3.83	5	1.17
Creative thinking skill	3.88	5	1.12
Logical thinking skill	4.32	5	0.68
Interpersonal skill	4.31	5	0.69
Negotiation	4.22	5	0.78
Morality & Integrity	3.7	5	1.3



**Figure 2: Radar Diagram - Gap Analysis of Employee Skills**

From the above Radar Chart, it is clear that the gap is spread more or less equally in all dimensions of Skill factors. Specifically if we refer the above table the skill gap is found to be higher in decision making, whereas little higher in analytical, morality and integrity, technical, problem solving, punctuality, learning and creative thinking. The low gap exists in communication, negotiation, interpersonal and logical thinking.

##### 5. DISCUSSIONS AND CONCLUSION

The competency level of individual varies from one another at a varying degree. From the study it is understood that the employees have low level of competency in dealing with complexities, openness in accepting mistakes, managing stress and enjoying team work. At this point, it is important to frame competencies relevant for overcoming the deficiencies and to reduce the gap between the actual and expected level of competencies and skills. Since competencies make employees to work effectively in organizations, they need to be made more relevant to each department or professional area in an organization.

The employees can be given awareness about the core competencies of the company so that they may be interested in developing it. Short-term training on developing each competency can be provided to the employees on a continual basis. Strategies can be formulated to engage the employees to work as team by providing training and

## Mapping Of Employees Skills And Competencies At M/S.Diesel Machinery Works

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education programmes on building and working in an effective team. A well defined counseling system can be implemented to encourage the transparency among employees. More of practicum classes can be introduced to enhance the cordial relation with fellow employees and to impart optimistic approach in handling difficulties and complexities.

Choosing methods for developing competency models is a strategic issue, which is usually restricted by resource needs, realistic support, time requirements, and conformity with expected outcomes or business purposes. A well built competency mapping system should be framed in such a way that it helps in framing an integrated performance management system with high performance standards, collection and proper analysis of factual data against the set standards, conduct of objective feedback meetings and direction with regard to specific areas of improvement.

To have healthy business in today's competitive world, organization need to have competent people and top management has role to provide related training program and also at correct interval and periodical, to their employee to increase the competent level like personal competency, knowledge competency, job competency and interpersonal competency to have higher productivity.

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#### Mapping Of Employees Skills And Competencies At M/S.Diesel Machinery Works

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