

Competency Mapping

— A DRIVE FOR INDIAN INDUSTRIES

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Abstract— Human resource management is a process of bringing people and organizations together so that the goals of each other are met. Nowadays it is not possible to show a good financial or operating report unless your personnel relations are in order. Over the years, highly skilled and knowledge based jobs are increasing while low skilled jobs are decreasing. This calls for future skill mapping through proper HRM initiatives. Indian organizations are also witnessing a change in systems, management cultures and philosophy due to the global alignment of Indian organizations. There is a need for multi skill development. Competency Mapping is a process of identifying key competencies for an organization, the jobs and functions within it. Competency mapping is important and is an essential activity. Every well-managed firm should have well defined roles and list of competencies required to perform each role effectively. Competency mapping identifies an individual's strengths and weaknesses in order to help them better understand themselves and to show them where career development efforts need to be directed. Competency mapping is not only done for Confirmed employees of an organization and it can also be done for contract workers or for those seeking employment to emphasize the specific skills which would make them valuable to a potential employer. These kinds of skills can be determined, when one is ready to do the work. Competency mapping is one of the most accurate means in identifying the job and behavioral competencies of an individual in an organization. Competency is a set of knowledge, skills and attitudes required to perform a job effectively and efficiently. A Competency is something that describes how a job might be done excellently; a Competence only describes what has to be done, not how. Core competency is something which cannot be copied and it is the pillar upon which individual rest.

Index Terms —Skill development, Core Competency, Competency Mapping, Multi Skill, Need fulfillment, Global alignment,



1 INTRODUCTION

Human resource management is a process of bringing people and organizations together so that the goals of each other are met. Nowadays it is not possible to show a good financial or operating report unless your personnel relations are in order. Over the years, highly skilled and knowledge based jobs are increasing while low skilled jobs are decreasing. This calls for future skill mapping through proper HRM initiatives. Indian organizations are also witnessing a change in systems, management cultures and philosophy due to the global alignment of Indian organizations. There is a need for multi skill development. Role of HRM becomes more important.

Competency Mapping is a process of identifying key competencies for a company or an organization and the jobs and functions within it. Competency mapping is important and is an important activity. Every well managed organization should have well defined roles and list of

competencies required to perform each role effectively. Competency mapping analysis individual's SWOT for better understanding and this helps to improve his career growth. This identifies the gap for improving knowledge to develop.

Every industry in the present scenario is trying to achieve high efficiency and effectiveness in order to survive in this cutthroat competition. Industry is basically classified into production and service sector. They try desperately to improve the efficiency of their system. All the methods and approaches for improving the performance and efficiency of their operations points to a basis key factor - "Skill and Competency. Skills and competency, therefore, becomes a focal point of companies, which aims at improving their performance. Every industry, especially production industries, emphasizes on skill and competency. It becomes mandatory for any production company, aiming at improving their performance, to map the skill level of their workers.

Skills mapping is a technique of studying and analyzing the skills possessed by the persons concerned. It is a comprehensive way of knowing the skill levels of the persons. Skill mapping evolves a result, which not only specifies the skill level of the persons but also identifies the Gray areas where improvement can be made by training or by other means.

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Skill mapping, thus, is fast becoming important, buzzword for any industry aiming at revamping themselves to the present competitive situation. It is becoming popular day by day and many companies are showing keen interest in using this technique to improve their efficiency.

Companies are vastly shifting their approach of having multi-skilled employees with knowledge of only one skill. Companies are interested in knowing the present skill level of their employees so that training can be given to improve their performance. This is where skill Mapping comes in to focus, which apart from mapping the skills also helps in identifying the strategies for multi skilling program for the company.

With increased importance to operational efficiency, cost-reduction, higher productivity norms and managing with fewer employees than before by corporate, brings competency as the most important yardstick for all Human Resource – related decisions like selection, assimilation, development, growth charting and promotion, etc.

The competence approach focuses on linking business strategies to individual performance efforts. It also encourages employees to develop competencies which can be used in diverse work situations rather than being boxed into the job. Development of employees focuses on enhancing their competencies rather than preparing them for moving to jobs. In this way they can develop capabilities useful throughout the organization as it changes and evolves.

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Competency Mapping is a process of identifying key competencies for an organization, the jobs and functions within it. Competency mapping is important and is an essential activity. Every well-managed firm should have well defined roles and list of competencies required to perform each role effectively. Competency mapping identifies an individual's strengths and weaknesses in order to help them better understand themselves and to show them where career development efforts need to be directed. Competency mapping is not only done for Confirmed employees of an organization and it can also be done for contract workers or for those seeking employment to emphasize the specific skills which would make them valuable to a potential employer. These kinds of skills can be determined, when one is ready to do the

work.

Competency mapping is one of the most accurate means in identifying the job and behavioral competencies of an individual in an organization.

2 DEFINITIONS:

2.1 Arya Chanakya, a well known royal adviser and prime minister from Vedic India, penned a famous book known as the **Arthashastra**, which is probably the first book on competency mapping. The book contains competency mapping models, the thesis and theories of human aptitude, intelligence quotient, emotional quotient and in general everything that is related to human behavior regarding work, logic and emotions. This book is an excellent leader and management book and is more than 3000 years old.

2.2 According to Boyatzis (1982) :

“A capacity that exists in a person that leads to behavior that meets the job demands within parameters of organizational environment, and that, in turn brings about desired results”

2.3 According to UNIDO (2002):

“A Competency is a set of Skills, related knowledge and attributes that allow an individual to successfully perform a task or an activity within a specific function or a job”.

2.4 According to RANKIN (2002):

“Competencies are definition of skills and behaviors that organization expects their staff to practice in work”.

2.5 ANSFIELD (1997):

“Underlying Characteristics of a person that results in a effective superior performance”.

2.6 WOODRUFEE (1991):

- **Competency:** A person – related concept that refers to the dimension of behavior lying behind competent performer.
- **Competence:** A Work – related concept that refers to area of work at which a person is competent
- **Competencies:** Often referred as the combination of the above two.

2.7 ALBANESE (1989):

Competencies are personal characteristic that contribute to effective managerial performance.

2.8 HAYES (1979):

Competencies are generic knowledge motive, trait, social role or a skill of a person linked to superior performance on the job.

2.9 WHAT IS COMPETENCY?

A competency is an underlying characteristic of an individual that is related to effective performance in a job or situation.

Competency: A person – related concept that refers to the dimension of behavior lying behind competent performer.

3 STATEMENT OF THE PROBLEM

Therefore, it appears necessary **TO** investigate if a difference exists in job competency expectations held by the manufacturing industries for their employees between the required competency levels to the existing level of working.

Accurate job competencies need to be communicated to all the employed in the manufacturing industries. Research indicates that the closer of the employer job competency expectations i.e, the required competency level to the actual job competency level of the employees brings the better chance for productivity improvement, waste elimination, multi skill development and the higher employees will rate overall job satisfaction.

In order to ascertain accurate and current job competency expectations i.e, the required competency to work in a manufacturing industry, professionals, supervisors and production heads were asked to rate the importance of the specific job competencies for the workforce. The competencies categories included: knowledge, ability and attitude. The managers were asked to list the required competency to perform a job and they were also asked to fix the required level of competencies in the specific competency.

3 LIMITATIONS

Gaining the cooperation of the employees was difficult at the initial stages of the study as the employees were not aware of the topic of the study.

- Some employees were not able to understand the questionnaire as it was new to the organization. To solve this problem and to make it understandable to all, the questionnaires had to be made in simple language and also with day to-day activities.
- Respondents were reluctant to give unbiased opinion fearing of the management.
- The data was collected from the plant through questionnaires. The respondents were not able to spend the desired time with the researcher.
- The Rater's decision on the employees was the final one. The problems like central tendency and other partially towards the staff may be present

4 SCOPE OF THE STUDY

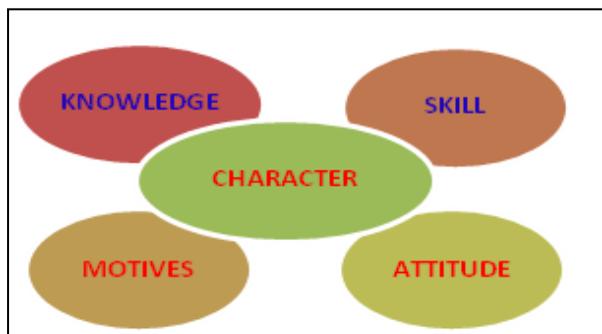
- The study analyses the skill level of Workmen in the organization, so that the training needs can be found out.
- The study could also provide an insight to the staff's multi-skill level.
- The model can be simulated in other divisions as well as other units.

5 SIGNIFICANCE OF THE STUDY

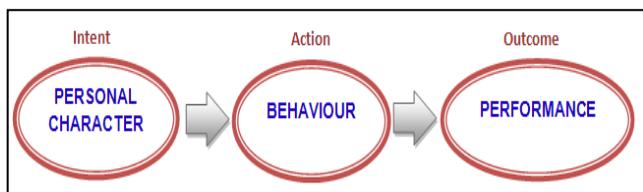
Competency Mapping is excessively used in the organization to determine the crucial elements and activities. The basic reasons due to which the mapping of the competencies is done are as follows:

- Once the competencies are determined, proper training can be provided to the individuals to work more efficiently on the processes.
- Key performance areas can be improved by understanding the fields where there is a gap between the actual and the desired results.
- If the competencies are determined for the given job, then the person whose career planning phase is taking place can consider those competencies and can be ready for the same.
- Through competency mapping, the individual is preparing himself for the next set of responsibilities.
- With the help of the competency mapping the individual can alter the style of work where the gap exists.
- By overcoming the differences in the desired level and the actual status of performance the individual can feel the increase in the self confidence and the motivation level.
- Competency based approach can lead the individual to derive much efficient results (with more accuracy) as compared to work in a non-competency derived situation.
- Helps the individual to determine the areas where the development is required and thus leads the individual to develop a self development plan.
- Competency mapping leads the individual to understand the actual position and the gap from the desired status of work.
- Competency mapping plays a crucial role in career planning of the individual in the organization.

6 FUNDAMENTAL CHARACTERISTICS:



Note: Knowledge, skill are surface competencies, which can be easily developed. Attitude, motives, and traits are core competencies which are most difficult to develop.



7 PROCESS OF COMPETENCY MAPPING

- Effective organization helps their employees by developing their career growth by giving technical support.
- Success of many organizations lies in the area of Training, Learning and Development that builds employer employee relationship

8 MAIN OBJECTIVE:

Primary:

- To map the technical competencies for the employees in different departments of a Textile Machinery Manufacturing Industry

Secondary:

- To develop the competency calendar for employees in any industry.
- To assess the Training need identification of the employees in the company
- To offer the suggestions to the organization for the betterment of the employees & Organization.

9 ROLE OF COMPETENCY MAPPING:

Competency mapping identifies an individual's strengths and weaknesses in order to help them better understand themselves and to show them where career development

efforts need to be directed. Competencies are derived from specific jobs within the organization and are grouped into categories like strategy, relationships, innovation, leadership, risk-taking, decision-making, emotional intelligence, etc.

10 STEPS INVOLVED IN COMPETENCY

MAPPING:

The **STEPS** involved in competency mapping to identify the key competencies for an organization and the job within the function:

1. Identify the department for mapping.
2. Identify the Structure of the organization and select the grades & levels.
3. Job Description from individuals and departments.
4. Conducting Semi-Structured interviews.
5. Collecting interview data's.
6. Classify the required Skill list.
7. Identify the skill levels.
8. Evaluate identified competencies and skill levels with immediate superiors and other heads of concerned departments.
9. Preparation of Competency calendar.
10. Mapping of Competencies.

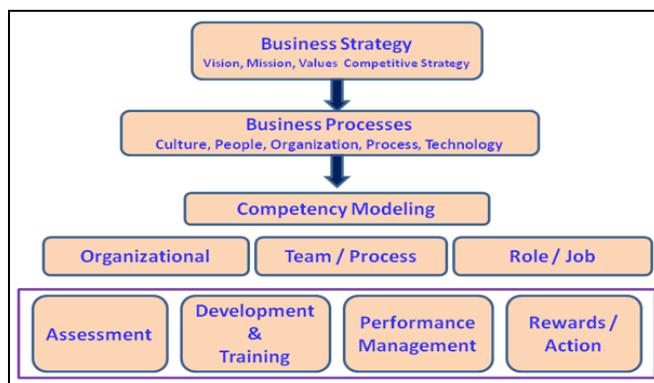
11 WHAT METHODOLOGY IS USED?

The following methods are used in combination for competency mapping:

- Interviews, Group work, Task Forces, Task Analysis workshops, Questionnaire, Use of Job descriptions, Performance Appraisal Formats etc.

11.1 MODEL USED:

The board approach followed by Arthur Andersen while mapping the competencies is represented as follows:



DIFFERENCE – Competence and Competency:

Competence	Competency
Based on the results	Based on individual behavior
Describes the feature of the job	Describes the feature of the person
Consists of the various skills and knowledge required to perform a job	Consists mainly of fundamental characteristics of a person which result in effective and/or superior performance on a job
Are not transferable since each skill is more specific to perform the job	Are transferable from one person to another
Measured by performance on the job / efficiency	Measured in terms of behavior / attitude
Are specifically process oriented	Are typically result oriented

These kinds of skills can be identified, when one is ready to do the work. Competency mapping is one of the most accurate means in identifying the job and behavioral competencies of an individual in an organization.

12 NEED FOR THE STUDY

There are some useful benefits of using competency model for the company, managers, and employees as well.

12.1 FOR THE COMPANY

- Support corporate Objective, Strategy, Vision, Mission and Culture.
- Establish performance appraisal by a systematic approach for career growth which results in improved job satisfaction and better employee retention.
- Increase the effectiveness of training and professional development programs by linking them to the success criteria.
- Provides clear two way communication process.
- Better understanding of Roles and responsibilities.
- Provide Common standards and same kind of work at equal levels that enable employees to move and work at different parts of the organization.

12.2 FOR MANAGERS:

- Identify performance level to improve the accuracy of selection process.
- Provide more objective performance standards.
- Provide good communication
- Develops Employer Employee relationship
- Reduces Career related issues.

12.3 FOR EMPLOYEES:

- Identify the critical Skill to perform in the organization.
- Targets, Roles & Responsibilities are very clear.
- Identifies the gap for improvement.
- Provides a systematic approach to improve the skill level.
- Improved Job Satisfaction.

13 RESEARCH METHODOLOGY:

13.1 Research Design:

A Research Design is the arrangement of conditions for collections and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure. The research is a descriptive research, as it includes surveying and fact-finding. The research was not done before for the organization. The research was supposed to explore details for further studies.

Competency analysis begins with identification of the workforce competencies required to perform the organizational business activities. Once the competencies are identified, a mapping between the targeted vs. actual value of competencies is required to measure, analyze and predict the future capability of competencies and take necessary corrective/preventive action to either enhance or maintain the current capability.

Identifying the tasks, skills, knowledge and attitude required to perform various organizational roles can be used in formulating job description, assessing employees' current level of competency, and activities like planning career development and coordinating competency development.

13.2 Sampling Method:

Census survey was adopted for the study. As it was census sampling, the entire population was taken for conducting the research. Hence no sampling tool/technique was used to choose the elements of the sample.

13.3 Sampling Design:

All 1400 workmen at different units & departments were taken, that comprises of all Production related workmen and also workmen in service departments related to production i.e., Quality assurance, Tool room, Maintenance etc,

14 DATA SOURCE:

14.1 Primary Data:

The first hand primary data was collected through questionnaires. In addition to it discussions were held with the immediate supervisors, the managers of each department.

14.2 Secondary data

The secondary data was collected through the company profile, the company manuals, and previous year records.

15 ANALYSIS:

Competency Mapping is a process of identifying key competencies for an organization, the jobs and functions within it. Competency mapping is important and is an essential activity. Every well-managed firm should have well defined roles and list of competencies required to perform each role effectively. Competency mapping identifies an individual's strengths and weaknesses in order to help them better understand themselves and to show them where career development efforts need to be directed. Competency mapping is not only done for Confirmed employees of an organization and it can also be done for contract workers or for those seeking employment to emphasize the specific skills which would make them valuable to a potential employer. These kinds of skills can be determined, when one is ready to do the work.

This study compared the workforce job competency expectations for experienced / trained employees in possession of more than 10 years from the date of joining. Workforces are technically separated into 2 distinct categories.

1. Work that is directly supporting the production
2. Work that is indirectly supports the production.

Direct workforces who were the permanent employee of the organization at the time of the survey were participated.

In the beginning of 2011, employees at different units working in various departments are communicated through their immediate supervisors requesting their participation. At the time of survey the number of Direct confirmed employees present at various units are Unit1: 540, Unit 2: 680, Unit 3: 180. Totally: 1400 employees. Usable responses were received from 1359 employees for a response rate of 97.07%.

The survey instrument was developed from a literature review of job competencies and was refined to three content areas namely knowledge, ability and atti-

tude. Research questions were designed to identify differences if any, in the permanent workforce based upon several criteria.

1. Type of work done by the operator.
2. Number of years the employee had worked in the organization
3. Knowledge of cutting Tools.
4. Knowledge of selection of cutting parameters
5. Ability to do work.
6. Ability to understand drawings
7. Ability to do self inspection
8. Ability to do CNC programming
9. Knowledge to latest techniques and systems like 5S, TPM, TQM, LEAN, ISO, OHSAS

These comparisons were made between the existing competencies arrived from the survey to the required competencies for an employee to perform a particular job. The gaps between these two are the need identified for the competency training.

Consistently, permanent employees were rated by their immediate line supervisor about their performance. The gaps for the need identified are focused by giving appropriate training. The training may vary accordingly, On-Job training & Off-Job training. Training given on need based. Need based fulfillment are done consistently for all direct permanent employees in the organization.

Future research is suggested utilizing to other units in the organization and also to the apprenticeship trainees and flexi work force.

16 CONCLUSION:

Skill development by Competency mapping is one of the most accurate means in identifying the job and behavioral competencies of an individual in an organization. Competency mapping should not be seen as rewards. All the stakeholders must see in the exercise an opportunity for long-term growth. Competency mapping is not only done for Confirmed employees of an organization and it can also be done for contract workers or for those seeking employment to emphasize the specific skills which would make them valuable to a potential employer.

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