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## AN EMPIRICAL STUDY ON COMPETENCY MAPPING OF OPERATORS IN BEARING LTD. – PUNE

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**Abstract:** The study brings out various issues faced by Bearing Ltd. in its initial period of inception. The organizational **workforce** was studied and emerging issues were surfaced. With everything going as per planned, the company faced the problem of increased cost of **rework** on finished product and increased in rate of operator's **turnover**.

Further investigation was undertaken to understand the actual reasons. While it was important to evaluate the results attained by an employee, it is also important for the organization to emphasize on the means adopted to achieve those results. Result is an indicator of an employee's performance on a given assignment and can be influenced by many other factors. However, the behavior display by an employee reflects his/her personality traits, which are more consistent. When we are able to judge the **capability** of employees and help them develop these, the capability of the entire organization gets enhanced.

**Keywords:** Capability, Rework, Turnover, Workforce.

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**Introduction:** Bearing Ltd was founded by a Swedish engineer Francisco Luis. A Swedish company that dominated the world market by its quality standard products. In 2010, Bearing Ltd as part of its expansion strategy decided to commence its new plant near Pune highway with an intension to cater needs of various segment such as power generation, renewable energy, construction, mining and heavy material handling, and industrial, electrical and power transmissions. Within 3 years the plant was able to reached 60% operations of its installed capacity. The plant was equipped with central service systems and temperature control within the workshops capable of meeting high quality standards and environmental, health and safety standards.

### **Literature Review – Background Study:**

**Competencies and competency models:** does one size fit all? Publication Details: Article published in ACA Journal, spring 1996, Volume 5 No. 1, pages 56-65. The study talks about the observation about what the authors presumes competency based approach that companies link to reward. He states that there should be great variety in the competencies that are the basis for competency-based pay. He remarks that competency-based pay plans look much alike from one firm to the next. In this article, the authors ask why this appears to be happening and whether it is desirable. He also provides example of companies such as American Express, The Boeing Co., General Electric Co., Hewlett Packard Co., Proctor & Gamble Co., 3M Corp., Wal-Mart Stores Inc., Walt Disney Co. and many others. The literature provides a detailed insight on the ways in which the competency should be formed and how it can be linked to the company's strategy.

**Competency Management:** A Practitioner's Guide: A book written by R. Palan Ph.D. Publication Details:

Rosetta Solution, Inc., 2003, Specialist Management Resources Sdn Bhd (Co. no. 385604-V) 14-4

The book provides a clear understanding competency and its implementation in organization. It contains the different terms used in the field of competency. It provides a practical approach of how to prepare competency models. It explains how competencies can be implemented in a practical and cost effective way. It also emphasizes on the fact that for a successful competency management; it is required to be aligned with the organizational strategies rather than purely an H.R. initiative. He states the prerequisites for better results of competency management is to view competency as a performance improvement initiative, a talent acquisition exercise, a tool for training and development and finally to deploy efficient personnel for present and potential jobs.

**Competency Model:** The Role of the Employment and Training Administration (ETA) Publication Details: Michelle R. Ennis, 2008, U.S. Department of Labour

The Literature mentions the competency model developed and followed in training pilots in U.S. Department. He states the shift of importance of training and development towards competency based assessment. It provides a perspective on how competency models can be used for succession planning. The paper examines the role of competency models in human resources practices and discusses where the Employment and Training Competency Model has assisted in sharing competency related information and resources to the publicly funded workforce investment system and private industry.

**Building Competency Models:** Approach for H.R. Professionals. Publication Details: Richard S. Mansfield, Human Resource Management, spring

1996, Vol. 35

A competency model is a detailed, behaviorally specific description of the skills and traits that employees need to be effective in a job. The two most common ways of developing and using competency models—(1) the single-job competency model and (2) the "one-size-fits-all" competency model—provide neither effective ways to differentiate the requirements of various jobs nor ways to match individual competency profiles to a wide range of jobs or assignments. Two widely used approaches to competency model building -- the single-job approach and the "one-size-fits-all" approach -- have limitations when competency models are needed for multiple jobs. It describes the requirements of a multiple-job approach to competency model building: a set of common building block competencies, provision for customization of competencies for individual job models, defined levels of performance for each competency, and a quick, low-cost approach to model building. The article concludes with a discussion of the competencies needed to implement the multiple-job approach and of trends in the workplace that are making this approach more attractive.

**Bearing Ltd. - Workforce Composition:** The workforce of the plant consisted of operators holding diploma & degree in mechanical & electrical fields. In the initial phase of production, the company went for mass recruitment drive to meet the manpower requirement & to begin the production meeting the deadlines. The company recruited fresher and provided some basic on the job training and were made operational within few days. Within few years, the company carried production activities and everything was going as per plan. The dispatch was done on time. The supply chain management was working properly and Inventory costs were under control. The customized SAP modules helped the managers of respective departments to monitor their performance and make necessary changes as and when required. Technology helped better synchronization of activities.

"All was working as per the plan, when suddenly, the cost of rework started increasing. This became one of the major concerns. On the other hand, the proportion of workforce changed leaving behind more I.T.I holders and few Diploma holders. Unequal wage & work distribution led to low motivation & turnover. Employee turnovers kept on increasing with fresher's being recruited every year while those with better experience selected the exit route".

Fresh hands in the operations led to many errors costing the company as increasing cost of rework further delaying their commitment to clients. BEARING LTD. being a multinational company had a

latest state of art infrastructure facility. It had also a provision to leverage on Automatic Production process for some assembly lines. Business scenario changed rapidly, as Global demand declined. Fulfilling the demand of existing clients became their priority.

At peripheral level it seemed there was lack of proper training given to these operators. On immediate basis training was provided to these operators. In spite of the training, the core problem that is the cost of rework on final products didn't change and it kept on worsening.

**Statement Of Problem:** On deeper diagnosis it was found that there was a terrible shift in the workforce. A huge gap between the experienced degree holders and the freshly recruited diploma holders was observed. Lack of experience triggered mishandling of equipment and error in manufacturing became routine issue. Any defect in the final product required a rework to be done before its dispatched & increasing number of reworked increased the cost & time of delivery.

**Finding - Diagnostic Study & Intervention:** A particular group of Operators were taken as sample from each department and kept under observation for some time. This study revealed the following findings faced by workforce in the plant.

**Unable To Maintain The Workforce Ratio:** The management had decided to maintain workforce composure at operator level; 80percent operators with I.T.I. and operators with Diploma at 20percent. The current workforce consists of 60percent operators with Diploma & 40percent of operators with I.T.I. This affected their cost of maintaining highly skilled operators where merely a less skilled operator was needed.

**Unequal Work-Allocation:** In absence of Job description, work was not allocated according to their qualification and capability. This caused lot of dissatisfaction & low motivation among operators. This was supposed to be one of the main causes for attrition at this level. Many times it was found both kinds of operators doing similar kind of job.

**Absence of Grade & Wage Structure:** There was no proper base to design Grade; it was found that most of the operators worked for 2-3 years at the same level without any proper job title or grade. There was hardly difference in wage structure for those who worked for long term. There would be an increase but it would be marginally not enough to get optimum output.

**Absence of Career Path:** Those operators who worked for more than specified no. of years didn't have a chance to enter management level. This was highly disappointing; there was an urgent requirement to design career progression.

**Lack of Training Need Analysis:** The training was provided to the operators but it needs and effectiveness wasn't assessed. Many times the operator was provided training which he didn't require or not of his concern area. There were instances where an operator was provided training again and again, as there was no proper track record showing his training effectiveness and his performance at job.

**Strategic Initiatives:** The HR department took the initiative and decided to address these issues by preparing a structured competency framework that could solve not only current problem but also prevent occurrence of such problem in future. This framework was designed keeping in view the issues highlighted during the diagnostic process.

As competent work forces ensure superior performance, keeping this objective in mind the study was undertaken to identify the characteristic of superior performers to benchmark employee selection and development and to facilitate better hiring and deployment decision.

At Bearing Ltd - Pune, the objective of undertaking Competency Mapping was to acquire & develop the competent workforce in departments such as Maintenance, Heat Treatment, Shop Floor and Quality. The core idea was to provide a foundation for assessing the operators and providing a platform from where they can elevate the superior performers on their career path. A career progression initiative integrated with suitable compensation package for their growth in the organization.

The process of preparing a competency framework for each department & job has been elaborated in the subsequent chapter along with adequate emphasis on undertaking assessing existing competencies of operators.

The findings have given rise to a different prospective towards solving the business problem. Further various recommendations have been presented to the management enabling better decision making. Immediate corrective action were implement & preventive action were taken to ensure such problem don't reoccur in future.

**Broad Objectives For Developing Competency Framework:** The below mentioned objectives have been taken into consideration for developing as framework for designing the "Competency Model" at Bearing Ltd. - Pune. Along with its broad implication, the company emphasized on achieving the following objectives:-

- To create a **Talent Pool**.
- To Initiate **Performance Improvement System**.
- To provide effective **training & development programs** that is essential and in line with the present business requirement.

- To implement **Grading System** for operators & undertake Performance Appraisal.
- To prepare **Career Progression** for Operators.
- To design **Competency Package** for Operators.
- The ability of the organization to **deploy workforce** in such a manner that will not only align the present operator - position (job requirements) but also help in shaping the future needs.

**Process For Developing Competency Framework:**

Step-1 Observational Study

Step-2 Interaction with Supervisors

Step-3 Designing Job Description

Step-4 Verifying with Departmental heads

Step-5 Identifying the SKA (Skill Knowledge Attitude) for Operators

Step-6 Understanding & Identifying of Job Requirement Behaviors for Operators

Step-7 Preparation of Competency Model Skill + Knowledge + Attitude & Behavioral Event Interview

Step-8 Validation of the Model

**Observation Study:** The workers were observed on the shop floor. All the activities were recorded in details. Every department workers were covered. All the activities related to their job and their inter-departmental dependencies were recorded.

**Interaction with Supervisors:** The activities of operators were verified with their respective supervisors. Non-value added activities were eliminated and focus was on core activities.

**Designing Job description:** The activities created a base for preparing Job description for all the operators.

**Verifying with the departmental heads:** The Job Description were verified with the supervisor and finally with the departmental head.

**Identification of SKA for Operators:** The Job Description on finalization proved a base for identifying the Skill, knowledge & Attitude required accomplishing that particular job successfully.

**Understanding & Identification of Job Requirement Behaviors for Operators:** The Competency Model was incomplete without aligning it with the expected behavior of operators on job. The departmental head were interviewed for this

**Preparation of Competency Model (SKA+BEI):** After receiving complete data the competency model was prepared clubbing the Technical competency with the Behavioral competency for all operators.

**Validation of the Model (Online):** After preparing the model, it was verified with the respective departmental heads and was documented after receiving conformation on the same.

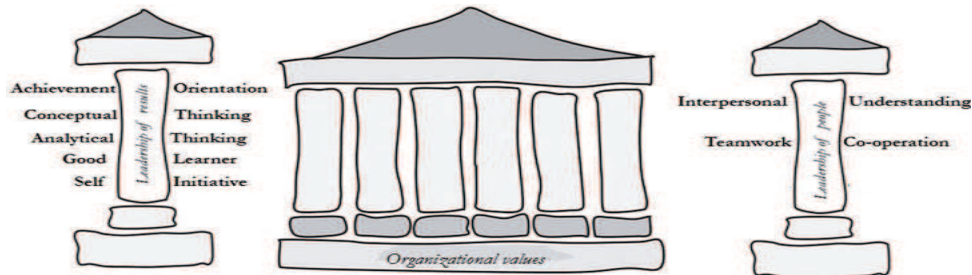
**The Cluster:** The competency dictionary has been grouped into four clusters or groups of distinguishing competencies, each cluster containing two to five

competencies. Each cluster has a narrative definition aligned with few behavioral indicators, or specific behavioral ways that demonstrate the competency on the job.

**Organizational values:** the beliefs, morals, principles and ethics that organization foster are bounded into fabrics that are shaped by the organizational processes, procedures & practices that become a part and parcel of organizational culture.

**Leadership of people:** the ability to understand the unspoken or partly expressed thoughts, feelings and concern for others and the genuine intention to work cooperatively with others, to be part of a team and to work together.

**Leadership of Results:** the drive to achieve goals by integrating organization & individual goals. The self-initiative and urge of learning new things that create innovative approach that addresses operational issues.



THE COMPETENCY CLUSTER SHOWING KEY BEHAVIOURAL ATTRIBUTES

**Organizational Value:** Ethics & Morale - The incumbent fosters and supports organizational principles and values

**Leadership of Result:** *Achievement Orientation - Puts extra efforts to achieve and align the individual goals with the organization's objective.*

*Conceptual & Analytical thinking - Uses logical reasoning and understanding to solve issues.*

*Initiative - Deals proactively and displays persistence to bank on existing opportunities fostering creativity and better time mgmt.*

**Continuous Learning:** The urge for learning something new and putting continuous efforts to upgrade knowledge & information.

**Flexibility:** Adjusting or modifying own behavior to work efficiently in a dynamic environment, coping with unexpected events.

**Creativity:** Questioning conventional approaches, exploring alternatives and responding to challenges with innovative solutions or services, using intuition, experimentation and fresh perspectives.

**Communication:** Listening to others and communicating in an effective manner that fosters open communication.

**Leadership of People:**

**Interpersonal Understanding -** Empathy and sensitivity to others, depth of understanding others, listening and responding to others, good communication.

**Teamwork -** Openness, Resolve conflict in positive ways, motivating others, positive expectation from others, co-operation and efforts to foster teamwork, Shares pertinent information with teammates

**Conflict Management -** Identify and takes action to

resolve conflict.

**Stress Management -** Maintain calmness in times of pressure

**Use Of Competency Model For Evaluation Process:**

The competency model developed was further converted into an assessment tool.

The operator were evaluated on the basis of skill matrix, designed taking into consideration the technical & behavioral competency. The weightage was assigned to the Attributes mentioned in the matrix and entire operators in the plant were assessed.

To eliminate variation and bias judgment in the assessment process, a weightage average of marks allotted by supervisors was taken. An operator was assessed by more than two supervisors.

The skill Matrix was designed and the operators were assessed on the basis of weights allocated by their departmental heads. The marks obtained were multiplied with the weights as specified by the departmental heads to arrive at the final score.

Every skill matrix was assessed separated on the basis of weightage assigned by the departmental heads. In short, skill matrix rating differed from department to department on the above basis.

**Competency Assessment - Data Analysis & Interpretation:** The workforces at the operators mainly categorized into I.T.I & Diploma holders. The overall manpower on the shop floor consisted of I.T.I. operators 33 in total and 52 operators as Diploma holders. The assessments revealed that operators having I.T.I. qualification consisted of 18percent more number of Excellent Performers as

compared to operators with diploma. This was reverse in case of average performers where the operators (I.T.I) were 11percent more than operators with diploma as seen in chart-1 in Appendix.

The assessment also raised a possibility that the operators having I.T.I knowledge stayed a longer time in the organization with an objective to get a better exposure to the technical knowledge. On the other hand, it also raised question as why Operators with Diploma qualification remained only for a shorter period. Moreover, their transition from Good Performer to an Excellent Performer was observed to be in a small number. However this fact required to be substantiated with the number of Diploma Holders leaving the organization in proportion to the Attrition Rate and Analysis of reasons for Exit refer Chart-2 in Appendix.

**Finding & Suggestion:** The findings provide an opportunity for the management to develop the skill & knowledge base of the average performers through training & development. The progresses of the operators are required to be monitored on a continuous basis to decide whom to layoff and whom to retain depending on the consistency of their performance. This would help in creating a talent pool to meet the organisational requirements in future.

The company has designed the career path for operator level employees. It had developed different grades for employees (operators) and an opportunity to emerge as a management cadre in future which wasn't possible earlier.

The company had prepared a budget to allocate the funds for operators falling in the grades depending upon the competency level which was later approved by the management and subsequently funds were allocated as per new grade and salary structure.

**Conclusion:** The study displayed an excellent initiative of the H.R. department aimed at facilitating

the recruitment, training and compensation on the basis of competency required by the operator on job. Later on it was to be excelled to a higher phase were the company planned to collaborate with the Technical Institute to identify potential candidate and provide them Industrial Training to meet it future requirements.

This study provides an opportunity to identifying competency required for various positions, their implementation and finally how to develop competencies among individuals.

It helps in understanding the importance of competency at job. How these competency Gap are identify? And how one can fill the gap? Assessing all the operators was a complex process that required a lot of planning and preparation. Moreover it was difficult for the supervisor to devote time from their busy schedule to assess the operators working under them. This crisis was met by developing an "Online Assessment" tool. As a result, the Assessor (Supervisor) would have to click on the link that was directed him to site where the skill matrix of operators would displayed pertaining to each department. He could begin the assessment process any time during the day. This saved their time and it was possible to get the overall result with 24hours without disturbing their routine work.

The Assessment results were used as a base for their appraisal and the H.R. department was successful in getting the budget sanctioned for appraisal and training. A formal structure leading the operators towards management cadre was also developed and sanctioned by the management refer chart-3 in Appendix. Moreover, the whole procedure was documented to provide a strong base for future implementation and control of competency mapping in the organization.

**Appendix**

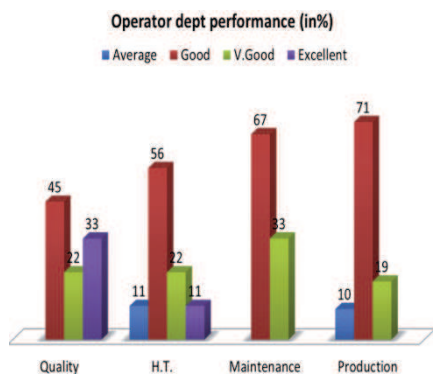
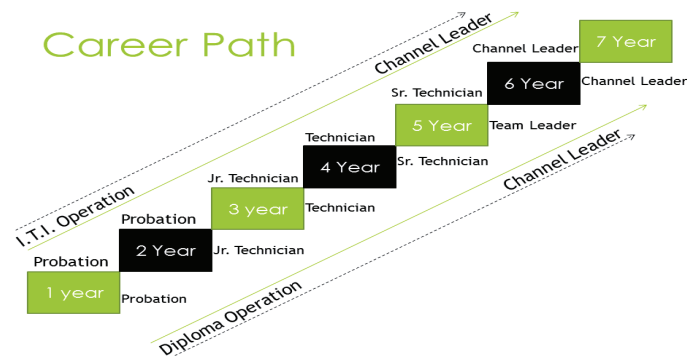


Chart -1



Chart-2



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