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## **Employee competency mapping as a mechanism to weed out competency gaps in information technology- A conceptual study**

**Mangala A and Dr. K Ramachandra**

### **Abstract**

Human resource is of paramount importance for the success of any organisation. It is a source of strength and aid. Human resources are the wealth of an organisation which can help it in achieving its goals. Competency mapping is often heard in all the industries making it apparent the need for assessing the competences among the employees and upgrading them so that right type of persons are assigned with the work. Competency mapping is a process which is designed to consistently measure and assess the individual and group performance as aligned with the expectations of the organisation and the stakeholders. The organisations function in cut-throat competition which necessitates the organisation to identify the set of core competencies which are key differentiators in the market place to be incorporated in the organisation. Strategic HR implementation needs a well-defined Competency mapping in the organisations. The current study is an attempt in this direction to identify how employee competency mapping has evolved over the years as an effective tool in creating and sustaining competitive advantage for the organisations.

**Keywords:** Organisation performance, knowledge, skills, competence, productivity

### **1. Introduction**

Competency is a cluster of related knowledge, skills, and attitudes that affects a major part of one's job (a role or responsibility), that correlates with performance on the job, that can be measured against well-accepted standards, and that can be improved via training and development. 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 (Archana. A 2015)<sup>1</sup>.

Organizations seeking to establish a highly effective and efficient workforce must develop a competency mapping technique, but research suggests that most organizations fail to recognize the competencies of the employees and

Utilize them efficiently thus disabling the employees to work at their best. When organizations recognize that people are truly their most valuable resource, then one of the roles they accept is helping employees manage their careers. Competency mapping is an important resource in this environment, and is an adjunct to knowledge management and other organizational initiatives. (Bharthvajan R 2013)<sup>2</sup>

### **2. Description of Competency Mapping**

Competency mapping involves the process by which we determine:

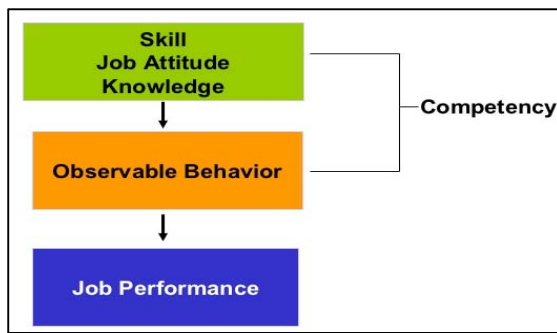
The nature and scope of a specific job role, the skills required, the level of knowledge required, and the behavioral capacities required to apply those skills and knowledge in that role. Competency Mapping plays a vital role in selecting, recruiting and retaining the right people. When the competency required for a particular position is mapped, an accurate job profile is created

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<sup>1</sup> Competency Mapping at Toyota Financial Services Corporation

<sup>2</sup> (An ISO 3297: 2007 Certified Organization) Vol. 2, Issue 11, November 2013 ISSN: 2319-8753

**Fig 1: Definition of Competency**



Source: www.exploreHR.org retrieved from www.slideshare.net/nusantara99 /competency-based-hr-management Strategy Traits

**3. Meaning and Definition of Competency Mapping**

**Competency**

Hogg B (1989) defined competency as “competencies are the characteristics of a manager that lead to demonstration of skills and abilities, which result in effective performance

within an occupational area. Competency also embodies the capacity to transfer skills and abilities from one area to another”.

**Strategy**

According to Jauch and Glucck (1984) ‘Strategy is a unified, comprehensive and integrated plan that relates the strategic advantages of the firm to the challenges of the environment. It is designed to ensure that the basic objectives of the enterprise are achieved through proper execution by the organization. Businesses have strategies, a formal planning cycle, a mechanism is devised to devote the resources to it in the competitive environment.’

**Traits**

Physical characteristics and consistent responses to situations or information

Self-Concept

A person’s attitudes, values, or self-image.

**Table 1: Selective Definitions of Competency**

|                            |   |
|----------------------------|---|
| Klemp (1980)               | An underlying characteristic of a person which results in effective and/ or superior performance in a job   |
| Boyatzis (1982)            | An underlying characteristic of an employee (that is, a motive, trait, skill, aspect of one’s self-image, social role, or a body of knowledge) that results in effective and/ or superior performance   |
| Guion (1991)               | Competencies are underlying characteristics of people and indicate ‘ways of behaving or thinking, generalizing across situation, and enduring for a reasonably long period of time’.  |
| Spencer and Spencer (1993) | An underlying characteristic of an individual that is casually related to criterion-referenced effective and/ or superior performance in a job or situation. They further clarified each of the terms as under:<br>An ‘underlying characteristic’ means that competencies is a fairly deep and enduring part of a person’s personality and can predict behavior in a wide variety of situations and job tasks.<br><br>‘Casually related’ means that it causes or predicts behavior and performance.<br>‘Criterion-referenced’ means that the competency actually predicts who does something well or poorly, as measured on a specific criterion or standard. |
| Rodrigues et al. (2002)    | Competency is a measurable pattern of knowledge, skills, abilities, behaviors and other characteristics that an individual needs to perform work roles or occupational functions successfully   |
| UNIDCO (2002)              | A set of skills, related knowledge and attributes that allow an individual to perform a task or an activity within a specific function or job   |

Source: Competency-Based Human Resource Management by Srinivas R.Kandula (2013) PHI Learning Pvt. Ltd.

**4. History of Competency Mapping<sup>3</sup>**

The term competency has been defined in the literature from several different points of view. It was originally used in the field of education to describe trainee teacher behaviors. This was implemented and successfully used by Prof. Bowden and Dr. Masters. Then later on this concept became very popular and widely exploited in the management field of management through the work of Boyatzis. However, the term competency was not “owned” by any particular group. In fact, a variety of stakeholders was involved in using the term, each with their own agendas (Mohammad Ahmed Abdullah Alsbabri and Beleqs Mutar Alaraqe 2015).

**5. Overview of Competency Mapping<sup>4</sup>**

<sup>33</sup> Acme Intellects International Journal of Research in Management, Social Sciences & Technology Volume 10, No.10 April 2015; Core Competency Mapping and Skills of Employees for Enhancement in IBM, India

<sup>4</sup> Dr. Murlidhar Chandekar and Sunetra Khatod (Jain) Abhinav International Monthly Refereed Journal of Research in Management & Technology Volume 4 Issue 1; Competency Mapping: A Strategic Tool In Employee Recruitment

**1. Competency Map**

A competency map is a list of an individual’s competencies that represent the factors most critical to success in given jobs, departments, organizations, or industries that are part of the individual’s current career plan.

**2. Competency Mapping**

Competency mapping is a process an individual uses to identify and describe competencies that are the most critical to success in a work situation or work role

**3. Competency profiling**

It is the process of identifying the knowledge, skills, abilities, attitudes, and judgment required for effective performance in a particular occupation or profession. Competency profiling is business/company

**6. Competency Modeling<sup>5</sup>**

Competencies are the observable and measurable attributes of an individual that are causally related to enhanced

<sup>5</sup> Assessment Associates International, retrieved from <http://aai-assessment.com/solutions/competency-modeling>

employee performance and organizational success. They typically cover:

- Knowledge—gained through formal education, professional certifications, training, and learned information used for the job.
- Skills—Proficiency acquired through previous work experience and practice.
- Abilities—A demonstrated capacity to acquire skill and/or knowledge that improves performance.
- Work Styles—A preferred style of behaving, frequently attributed to one’s personality (i.e., Flexibility).
- Motivation—Recurrent thoughts and tendencies that drive behavior (i.e., Achievement Drive).

**7. Difference between Competence and Competency**

| Competence  | Competency   |
|---|--|
| Based on the Results  | Based in 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  |

**Source:** R. Yuvaraj 2011 International Journal of Scientific & Engineering Research, Volume 2, Issue 8, August-2011 ISSN 2229-5518 retrieved from <http://www.ijser.org/paper/Competency-Mapping.html>

**8. Types of Competency**

Spencer and Spencer (1993) in their work *Competence at Work* have defined competency as “an underlying characteristic of an individual that is casually related to criterion-referenced effecting and/ or superior performance in a job situation”.

An ‘underlying characteristic’ means that competencies is a fairly deep and enduring part of a person’s personality and can predict behavior in a wide variety of situations and job tasks. ‘Casually related’ means that it causes or predicts behavior and performance. ‘Criterion-referenced’ means that the competency actually predicts who does something well or poorly, as measured on a specific criterion or standard.

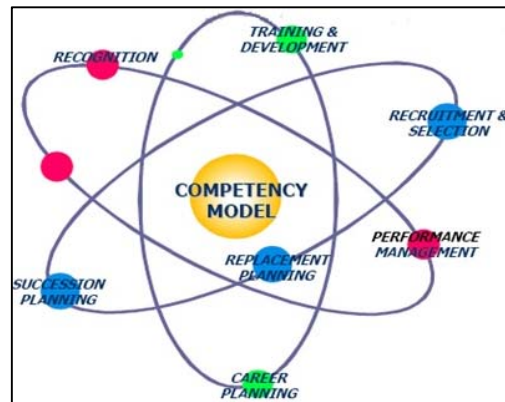
**9. Five Types of Competency**

|              |  |
|--------------|--|
| Motives      | The things a person consistently thinks about or wants and that causes action. Motives ‘drive, direct, or select’ behavior towards certain actions or goals and away from others |
| Traits       | Physical characteristics and consistent response to situations or information  |
| Self-Concept | A person’s perception towards self and the world   |
| Knowledge    | Information a person has in specific content areas   |
| Skill        | The ability to perform a certain physical or mental task   |

**Source:** Competency Mapping by R.K. Sahu (2009) Excel Books Publications

**10. Areas of Implementation<sup>6</sup>**

The competency mapping can be applied to the areas depicted in the following diagram:



Some of these areas are explained below:

**Recruitment and selection**

Competencies can be used to construct a template for use in recruitment and selection. Information on the level of a competency required for effective performance would be used to determine the competence levels that new hires should possess. This results in hiring of an employee who is organizational as well as role fit.

This way we can reduce the cost of training of the new hired employees. Employees will be productive from Day 1 and no man-hours will be lost in the training of new hires.

A firm that knows how to assess competencies can effectively hire the best at a reasonable price, for example hiring under-priced but highly entrepreneurial management graduates from lesser-known business schools.

**Training and Development Requirements**

It involves identifying the gap between competencies required for the position and those possessed by the employee. Any such gap is bridged by providing training to the incumbent for those particular competencies only.

**Career and succession planning**

It involves assessing employees’ capability to take on new challenges. In order to see if an employee is suitable for occupying position at the top management; his current competency level ought to be matched against those that required at higher level position.

**Performance Management System**

It is important to correlate performance result with competencies. Performance management system should be competency based and not just result based.

Competency based performance management would focus on “HOW” of performance and not on “WHAT” of performance i.e. not on results but how the results are achieved

Effective PMS should provide link to the development of an individual and not just to rewards.

<sup>6</sup> Evolving Role of Competency Mapping in HR Posted in Human Resources Articles, Published on 29 May 2013; retrieved from <http://www.mbaskool.com/business-articles/human-resource/7527-evolving-role-of-competency-mapping-in-hr.html>

## **Rewards and Recognition**

Competency linked benefits is a new concept after performance linked incentives. Competency linked benefits focus on the fact that employees should work hard towards developing their competencies as and when requirement arises for performing their job effectively. It rewards employees who not only work hard towards achieving their target but also who put effort in enhancing their competencies (keeping in mind the dynamic needs of the job at hand).

## **11. Need for Competency Mapping<sup>7</sup>**

### **Past Vs Present**

From almost three decades we can see that highly skilled and knowledge based jobs are increasing while low skilled jobs exist but they too think on improving scalability of proficiency. This calls for future skill mapping through proper initiatives. Indian organizations are also witnessing a change in systems, technology, cultures and philosophy of management due to the global alignment of Indian organizations. There is a need for multi skill development based on the jobs

### **Competitiveness**

To endure in this cut throat competition every industry is striving hard to increase high efficiency for more revenue. Industry is basically classified into design, production and service sector. They try desperately to improve the efficiency of the system using various tools. All the methods and approaches for improving the performance and efficiency of the operations points to a basic key factor of skill and competency.

### **Upskill and Multi-skill**

Companies are vastly transitioning their approach of having multi-skilled employees and strives to retain. They 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 or assessment centers gets established, which apart from mapping the skills also helps in identifying the strategies for multi skilling program for the company.

### **Cost Efficiency**

No doubt, organizations are focusing on optimizing operational efficiency, savings Vs costs, higher productivity models and managing with multi-skilled employees than before by corporate stages competency mapping into more significant podium.

### **Approach towards Change & Evolve**

The competence framework approach focuses on coupling business strategies to individual performance. It reassures 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 proficiencies rather than preparing them for moving to jobs. In this way they can develop capabilities useful throughout the organization as it changes and evolves.

Maturity level

Competency Framework is a three decade old concept. And many organizations have adapted this practice, and have effectively used it in various areas to display the connection to increase human capital. Competency Framework is a gauge that connects right from selection, progression, performance, succession, and recognition. It is remarked to foster the maturity and transparency to the system.

### **Expectation Alignment**

While Gen Y is today's predominant workforce, and the top five expectations from them are-

It is obvious that for creating an interesting job and having a right talent, it's imperative to know what is required for the job and how interesting can it be made and who suits well for it and how do employer extends best of career progression. The three out of five needs are related to what we demand efficiency with productivity having engaged employees. All of them are so entangled to align with corporate objectives defining starting from strategies to bringing in clarity to employees.

## **12. Competency Mapping Approaches**

Businesses use competency mapping to match the capabilities and talent of personnel with specific job tasks and organizational needs. The technique involves conducting a job analysis to identify core skills and behaviors required to perform the role, drafting a job description based on the key competencies and aligning resources to best fulfill competency needs. Having a competency map makes it easier for firms to identify qualified candidates, assess performance, focus training efforts and enhance overall productivity. Common competency mapping approaches include assessment center, critical incidents technique, interviewing, questionnaires and psychometric tests.

### **Assessment Center**

The assessment center methodology involves situational observation to evaluate performance and growth potential of candidates relative to specified job attributes. The approach uses various types of discussion and simulation exercises to reflect real-life demands of the job. Candidates are asked to work through certain scenarios while a trained assessor observes their behavior. The situations are designed to reveal skills and aptitude that help identify which individuals are good matches for the current and future requirements of the job.

### **Critical Incidents Technique**

The critical incidents technique uses data gathering and analysis to identify job-specific behaviors that influence the success or failure of an individual or collective business operation performing a certain job. Data about critical events -- exceptional examples of accomplishment or failure -- is collected through interviews or questionnaires as soon as possible after occurrence. The incidents are then categorized according to associated job behaviors to reveal patterns of performance gaps and strengths.

### **Interviews**

The candidate interview provides first-hand insight into candidate behaviors and is an effective method for collecting relevant information and impressions about prospective employees. Interviewers should be prepared

<sup>7</sup> Prathima Jagadeesh (2015) WHY! HOW! & WHAT! Of Competency Mapping Published on November 13, 2015; retrieved from <https://www.linkedin.com/pulse/why-how-what-competency-mapping->

with targeted questions that not only draw out details about tangible job experiences but also give clues about the candidate's general motivation, disposition and outlook. The interview record can be compared against the competency map created for the job to determine which candidate offers the best match for the organization's needs.

### Questionnaires

Questionnaires offer another approach for gathering information about job competencies and work performance. Several types used in competency mapping include the common metric questionnaire that highlights work requirements and activities, functional job analysis that describes job duties and characteristics, occupational analysis inventory that specifies work elements for almost all occupations, position analysis questionnaire that ties job characteristics to human characteristics and work profiling system that measures ability and personality attributes. The multipurpose occupational system analysis inventory highlights tasks and competencies for government jobs.

### Psychometric Tests

Psychometric testing provides a consistent approach to measuring and quantifying a sample of behavioral attributes. The two main types of psychometric assessment are aptitude tests and achievement tests. Aptitude tests are used to identify natural inclinations in a specific area, such as art or science, and are designed to help predict how well a person would perform in a given specialty after being provided with training. Achievement tests measure the level of proficiency an individual has achieved in a certain area, such as mathematics, language skills and ability to reason.

### 13. Organisations Using Competencies

Hewlett Packard, Google, TATA Group, Aditya Birla, JK Group, Reliance Industries Ltd, Pepsico, Volvo, United Nations, Nike, Pfizer, 3M, Deloitte, PricewaterhouseCoopers, McDonald's, Starbucks, American Express, Johnson & Johnson, Coca-Cola, Toyota, Bank of America, BP, Wells Fargo, General Motors, HP, Radio Shack, HCA, Carlson Companies, BHP, IBM, Infosys, Wipro, Dr.Reddy Labs, General Electric, PDVSA, Anheuser-Busch, Girl Scouts USA, US Federal Reserve, KPMG, Sanofi, Ingersoll-Rand, Lockheed Martin, Konica Minolta, Luminant, Prudential, Inven-sys, ConAgra, Expedia, DuPont, General Mills, Schlumberger, Grainger, and many more.

### 14. Conclusion

All employees in an organization are unique in terms of their qualities, motivation, skills, and personality traits. The challenge for modern HR professionals is to ensure that each employee perform their duties to the best of their ability by identifying a role which is best suited for them. This matching of jobs and people to facilitate excellence in performance can be achieved through competency mapping. Competency mapping is a technique that involves identifying various competencies/skills that are required to complete a given job/task/role. The process consists of breaking a job into its most basic constituents (managerial, technical, conceptual, and attitude) needed to perform the same successfully. Competency mapping can be done for both roles as well as individual employees in order to assess the suitability of an individual in performing the given role.

Competencies are the proverbial holy grail of talent management. Identifying critical competencies can help create detailed role directories that can guide organizations when making hiring or promotion decisions specific to that position. In the present economic environment, employee performance is a primary concern of HR managers and the best way to recognize performance is to observe key characteristics of high performing employees that distinguish them from less productive employees.

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