

Reprint

ISSN 2250-0367

**INTERNATIONAL JOURNAL OF
MANAGEMENT STUDIES AND
APPLIED ECONOMICS**

(IJMSAE)



UGC Approved Journal

www.ascent-journals.com

A STUDY OF COMPETENCY MAPPING MODELS: A REVIEW

RUTA S. DESAI¹, ARUN MOKASHI²

¹ Research Student, IMCC, Pune, India

² HOD, Department of Commerce, T. J. College, Pune, India

Email ID: ruutha@rediffmail.com , mokashiarun7@gmail.com²

Abstract

Today's business organizations run businesses through people and human resource is the most valuable resource of it. Organizations thus give maximum importance to the development of its human resource and hence improving their performance. Organizations today need to face competition and should excel in what they do. Competency mapping is vital to improve organizational performance. Competencies are the knowledge, skills and abilities of an individual that result in better performance. Competency mapping involves identifying key competencies and using it for the HR applications.

Many industry experts have studied competency mapping and developed various competency models for certain industries but with diversified interests. This paper presents a comprehensive study of competency models and how its application is beneficial for the organizations.

Key words: competency mapping, competency mapping models, knowledge, skills, abilities, behaviours.

Introduction:

Human resource management is a process of collective work and efforts put by employees and management as to achieve individual and organizational goals. Without a firm's personnel relations are in order, it is exceptionally tough to build an impressive financials. Subsequently there is a need for extremely skilled and knowledge based employees. It calls for current and potential skill mapping through proper HRM practices within an organization. Due to the international alliance, Indian organizations are observing a change in practices, processes, systems, organization cultures and philosophy. There is a requirement for multitasking in order to endure or sustain in the today's competitive environment. Competency is a permutation of knowledge, skill and attitude which is required to achieve high performance with effectiveness and efficiency. Competency Mapping is a process to know how competent the organization and its members are in this regard. Competency mapping recognizes the individual's strengths and areas for improvement and directs them towards career development aspects. Competency mapping has always been the most precise means for identifying the job, behavioural and personal competencies required for an individual to perform better.

The Competency models not only help the organizations to produce excellent performance but can also provide an important and useful tool to guide individual development of employees. Individual competencies are planned into competency models to empower people in an organization or profession to comprehend, converse, and apply the competencies to employee's performance.

Competency Mapping is a procedure to recognise vital competencies for an organization and/or a job. Organizational psychologists have refined this empathetic and transformed it into a organizational and official process called Competency Mapping. It has arisen as one of the most powerful tools serving the enhancement for the HR experts in finding the precise or correct employee for a job and development of the employed person in doing the allocated job effectively and efficiently.

Meaning of Competency

The word competency is derived from Latin word "Competere" it means "to be suitable". The competency concept was initially developed in the field of psychology to specify ability of an

individual to respond or react to the demand placed on them by their environment. Competencies are resultant from specific job within the organization.

Components of Competency

1. Knowledge:

Knowledge is an organized body of information that a person mentally possesses as a result of formal education, training, or personal experience.

2. Ability

An ability is the natural aptitude or acquired proficiency to perform an observable activity.

3. Skills:

The task may comprise physical or mental actions accomplished with fluency and accuracy by a worker holding the skill.

4. Personal attributes:

Personal attributes is a tendency on the part of an individual to behave in a particular way.

Meaning of Competency Mapping Models:

A competency model (also referred to as a competency mapping model) is a set of specific, visible and measurable information, skills and characteristics exhibited by behaviours that lead to exemplary success in a given work environment.

A competency model is a blueprint for defining ability and expertise requirements of a job or a task. It is a set of skills that works together to establish effective and meaningful job results. Competency models are commonly used in industry to describe and evaluate hard and soft skill competencies within organizations. They are an important part of staffing and selection processes of an HR department, along with talent and performance appraisals. It is an HR-created manual that lays out specific skills, expertise, and behavioural requirements that enable an employee to perform his or her job well.

A competency model is an HR tool for selecting the right candidate, training and developing the employee, assessment, and succession planning that defines the blend of expertise, skills and attributes necessary to perform tasks successfully in an organization [1]. A competency model is a set of skills and performance requirements that defines capabilities for a specific job [2]. It is a

structure for organising competencies needed to perform well in a particular job, job family, or organization [3].

The model is divided into different levels of competencies, with explanations for actions and behaviours for every competency to which it is associated. Competency models are regularly customised to the unique needs of an organization. As a consequence, the components of a competency model express the circumstances and conditions of success in specific terms [4-6].

Competency models can be produced internally or imported, and they can be constructed from scratch or from a proven competency model [7].

Evolution of Competency Mapping Models:

- **McClelland Model (1973)**

Iceberg Model: The “iceberg” model has associations for design of competency-based human resource applications. For more complicated occupations, behavioural factors, motivations, and characteristics are more critical than the skills and experience required to perform the job. Training and exercises help to develop knowledge and skills, but behavioural competencies are harder to learn and acquire. They're embedded deep in a person's personality and can be difficult to modify

McClelland's model explains the basics of how motives and behaviours can be classified to map the competencies and behaviours. He has proposed that people are motivated by three basic needs that are achievement, affiliation and power. All people possess these three needs but in varying degrees [8].

- **Organizational Adaption Model by Charles Snow (1978)**

Contingency model of Charles Snow links organizational performance to HRM and competency. Strategies determined by on extent to which cause-effect relations affecting organizational performance are identified and amount of formalized standards of necessary performance [9].

- **Theory of Action & Job Performance By Boyatzis (1982)**

R. Boyatzis, defines competency as a capability, proficiency or ability. It is a set of interrelated but diverse sets of behaviour ordered around an essential construct, which is called the “intent”. He proposed a model of theory of action and job performance to show the circumstances below which it is possible to assume operational performance. R. Boyatzis pronounces that if any of two components of the model overlap it will raise the chances of effective and positive performance of an employee, but if two of them don't it may have the opposite and reverse effect [10].

- **Elliote Jaques (1990)**

Elliote Jaques provides a normative model of effective hierarchical organization with an emphasis on competencies [11]. Stratified systems thinking theory indicates the level of work or level of difficulty at which a person can successfully function. It categorizes five levels of work, differentiated on the basis of complexity and time-span of decision-making. Each level has a definite value-adding theme which provides an exclusive contribution to the stream of work within organisations, and no level is more important than another. Finding the right fit between individuals and job levels is still crucial in determining success for both individuals and organisations.

- **Peter Senge's Learning Organization Model (1990)**

Peter Senge's approach to whole organization competency model is captured in his notion of the “learning organization” [12]. Its' essential features embrace encouragement and development of new abilities or skills, revolutionary learning or wisdom for endurance, learning through performance and practice and the inseparability of process and content.

Senge's learning organisation describes about managing the success and development of an organization and how employees contribute the extra mile that goes beyond the expectations of the company. The disciplines of learning organizations are as follows:

1. **Building shared vision**
2. **System thinking**
3. **Mental models**

4. **Team learning**
5. **Personal mastery**

- **Competences at Work by Lyle Spencer and Signe. M. Spencer (1993)**

Each competency at work place is generally divided into a positive number of behavioural indicators. These behavioural indicators clarify how the competency is demonstrated at different levels of competence. Individual behaviour is impacted by a number of motivational factors, although the work environment can provide external motivation, it is important fact that internal motivation is impacted considerably by many life events, which can influence an individual's ability to achieve and constantly demonstrate their capabilities. Competencies at work by Lyle Spencer insisted that personal characteristic like motives, traits; self-concept and knowledge have an effect on the behaviour of an employee. The work of Lyle Spencer depicts that emotional and social intelligence account for substantial and important amount of variance in understanding performance in competency studies. As companies are shifting their approach of having multi-skilled employee with knowledge, the researcher has used performance appraisal as one of the elements of competency [13].

- **HR Roles Model by Dave Ulrich (1996)**

Dave Ulrich proposed model in 1995 [14]. The Dave Ulrich HR Model is intended explicitly to organize human resources functions. In this model, HR functions are classified into four segments. Further he stressed that shared service activities should be operated in call centres which can provide the basic support and administrative functions to the rest of the business. The aim to utilize the Ulrich HR competency model is to be able to make good and effective shifts from strategic management, to administrative, and Human Resources.

Business partners relate to small teams or individuals who work collaboratively with managers of the organizations to carry out strategic management and key initiatives. Now, the centre of expertise acts as repositories of technical know-how in line with employment relations, resourcing, and reward; to name some. This aims to be able to propagate and

develop policies and also providing the support needed by different business units as well as shared services.

- **Lucia and Lepsinger (1999)**

They describe competency as “cluster of related knowledge, skills, attitudes that affects a major part of one’s job (or role 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” [7]. They have not focused on connection to the strategic or organizational level. Instead their “competency pyramid” gives more detailed and psychologically sound account of the kind of competencies they are looking at.

Personal characteristics and aptitudes

Knowledge and skills

Behaviours

- **Capability model by Mark Mumford (2004)**

This model clearly reveals that the individual attribute of the employees is very important for the development of competency within the work environment as well as among the individuals. The intellectual ability, motivation and personality entwined to develop the competency among the employees and equip them to possess the capability of problem-solving skill, social judgments and knowledge. As performance is measured by output, the researcher understands that knowledge and skill are an essential element to ensure quality of production output, which is considered as a major element in researcher model [15].

- **Campion’s model (2011)** [10]

It applies to professional work, suggests that team composed of individuals with complementary competencies are more effective and have higher levels of job satisfaction than teams whose members have the same competency sets. This is especially true for work that is complex and diverse in scope.

- **Advanced Manufacturing Competency Model**

The Advanced Manufacturing Competence Model was established in partnership with the Employment and Training Administration (ETA) and leading industry organisations. For confirming that the model correctly represents today's manufacturing workforce's experience and skills ETA has partnered with industry leaders to update the concept, which was last revised in 2010. The revised model, which was improved in January 2020, reflects a convergence of competencies across a broader spectrum of Advanced Manufacturing industries. The new model increases skills clarity for a stronger talent network, allowing job seekers, training agencies, and employers to be more aligned and efficient in hiring, training, retaining, and skills development talent in the United States.

The Advanced Manufacturing Competency Model was developed as manufacturers realized the importance of having a mutual understanding of the initial-level and technical-level skills they need for a long-term viable outcome. The structure does not replace or replicate existing skill standards; rather, it identifies the key essential skills and helps workers in advanced manufacturing environments recognize the skills of high-performing workers.

- **ASTD Competency Model (2013)**

Key objective of the 2013 ASTD Competency investigation was to refine the 2004 study's knowledge, skills, abilities, and behaviours. Technology, measuring and evaluating, and talent management were observed to be out of date and needed to be updated. Furthermore, the 2013 Model's framework was altered to reflect a transition away from roles and a hierarchical structure in the AOE's (Area of expertise).

A competency model is an illustrious graphical depiction of the expertise, skills, abilities, and behaviours (or competencies) needed to excel within specific career - in this case, training and growth.

The Foundational Competencies are included in the 2013 Model's base structure. The specific AOE's are found in the second structure, the pentagon that sits on the base. The four positions of learning strategist, business associate, project manager, and technical specialist have been replaced in the current 2013 image.

Analytical study of competency models:

Sr. No.	Author	Model Name	Objective of model	Highlights of model	Central Competencies in the model
1	Prahalad & Hamel, 1990	Core competence model	Competing to be unique	Strategic objective should not be to fight off competition but create a new competitive space	Core competencies: Resources, Capabilities, Competitive advantage, Strategy
2	Javidan, 1998	Core competence hierarchy	Extension of core competence model	Criticized core competence model in conceptualization of core competencies. Javidan states that resources lie at the bottom of hierarchy which builds firm's competencies.	1)Resources: physical resources, human resources, organizational resources 2)Capabilities: organization's ability to exploit its resources 3)Competencies: coordination and cross functional integration of the firm 4)Core competencies: lie at higher level of competence hierarchy and includes skills and areas of knowledge shared across business units
3	Campbell, 1990	Campbell's model	The structure of performance can be defined in 8 dimensions.	Describe general structure of job performance in terms of 8 dimensions	1)Competence in a particular job role 2)Competence in non-job-specific tasks 3)Oral and written correspondence 4)Efforts to be shown 5)Maintaining one's own self-control

					6)Enhancing peer and team success 7)Monitoring 8)Administration or management
4	Lucia &Lepsinger, 1999	Lucia and Lepsinger model	Defined competency and developed competency pyramid	Authors clearly differentiated competency and performance. They considered types of behaviors that differentiate between superior and average performers. Cluster of these behaviors was formed to create general competency descriptions	1)Personal characteristics and aptitude: innate and difficult to change 2)Knowledge and skills: learned through training and experience 3)Behaviors: indicators of the other competencies, they can be observed and easiest to change.
5	Mark Mumford, (Northhouse, 2004)	Capability model	Explain the underlying elements of effective performance	It defines performance as the abilities that enable the successful performance.	1)Personal characteristics, such as general cognitive capacity, crystallized cognitive ability, motivation, personality, and so on. 2)Competencies Knowledge, problem-solving skills, and social judgement skills 3)Results
6	Urban Liungquist, 2007	Urban Liungquist model	Criticized Javidan model that descriptions of related concepts are	Fundamental features of associated concepts are suggested i.e. competencies strengthen, capability support and	1)Competencies: noticed by developments 2)Capabilities: noticed by assistance

			not clearly defined	resources optimize key competencies.	3)Resources: by core competencies utilizations.
7	Erpenbeck, 2003; Heyse, 2003	KODE (Competency Diagnostics & Development)	Suggested 64 competencies derived from 4 basic competency categories	KODE suggests methods and tools for execution of competency-based approach	1)Personal competencies 2)Activity and behavioral competencies 3)Social communicative competencies 4)Technical and methods competencies
8	Elliote Jaques 1990	Requisite Organization model	As an indicator of job difficulty, the time span of discretion is used.	RO is described as a set of guidelines or rules combined with SST improve organizational effectiveness	Capability divided into 5 factors: 1)Knowledge and skills 2)Values 3) Temperament 4)Cognitive capability 5)Socio-emotional maturity
9	Peter Senge 1990	Learning Organization model	Study of how LO helps people develop their capabilities to create desired results	Organization with ideal learning environment encourages team learning	Leadership roles defined as: 1)Systems thinking 2)Personal mastery 3)Mental models 4)Creating a common vision 5)Collaborative learning
10	Dave Ulrich 1996	Ulrich model	To organize HR functions	Classification of HR functions into 4 segments and effective shift from strategic management to	1)Strategic partner 2)Change agent 3)Administrative expert 4)Employee champion

				administrative and human resources	
11	John Burgoyne & Roger Stuart 1976	Lancaster model of managerial competencies	Understand role played by deliberate training and education activities in development of managers	Highlights existing theories research relevant to managerial qualities, sources involved in acquisition of specific qualities of managers	Divided 11 competencies under 3 levels 1)Basic facts and skills 2) Attributes and skills 3)Meta qualities
12	R. Boyatzis 1982	Contingency theory of action & job performance	The principle of competency is based on the theory of efficiency.	Success occurs when a person's capability matches the demands of the job and the organizational environment.	3 clusters that differentiates between exceptional and average performers, use the following criteria: 1)Cognitive abilities 2)Competencies in emotional intelligence 3)Competencies in social intelligence

Conclusion

In order to ensure rapid organizational growth and development, managers in the business world must actively recognise and cultivate desirable competencies among their employees. The competencies needed to make employees successful change with business environment on a regular basis. As a result, it is important for all company executives as well as all staff to recognize the maps and assess the current levels of various employee competencies in order to improve individual and organizational effectiveness.

There are various competency models suggested by various experts but these models cannot be applied as it is to other organizations. The reason behind this is these models are designed based on specific objectives, conditions and mainly the human resource of the organization; it cannot be the same in other organizations. So, the models can be used with few changes in the existing models. So organizations must design and adapt the models which are based on their vision, values and objectives to achieve the desired goals.

Competency models can help organizations to increase productivity and effectiveness of the workforce to achieve business results and this can be achieved through:

- a) Reducing percentage of wrong hires to ensure competent person is selected for the right job.
- b) Competency based training programs to improve the employee productivity.
- c) Developing competency based succession planning to select competent successor.
- d) Frequent assessment of important competencies during the performance reviews helps to enhance business results.

References:

1. McLagan, P. A. (September 1989). Models for HRD Practice. *Training and Development Journal*, 41, 49-59.
2. Cooper, K. C. (2000). *Effective Competency Modelling and Reporting : A Step by Step Guide for Improving Individual & Organizational Performance*. New York: Amacom.
3. J. Shippman, R. A. (2000). The Practice of Competency Modeling. *Personnel Psychology*, 53(3), 703-740.
4. Cook, K. W. (1996). Job / role competencies practices survey report. *PA: Development Dimensions International*.
5. Parry, S. B. (1996). The quest for competencies. *Training*, 33(7), 48-56
6. Parry, S. B. (1998). Just What Is a Competency? And Why Should You Care? *Training*, 35, 58-64
7. Lepsinger, R. a. (1999). *The art and science of competency models: Pinpointing critical success factors in organizations*. San Francisco: Jossey- Bass/Pfeiffer.
8. McClelland, D. C. (1973). Testing for Competence Rather Than for Intelligence. *American Psychologist*, 28(1), 1-14.
9. Raymond E. Miles, C. C. (1978). Organizational Strategy, Structure, and Process. *Academy of Management Review*, 3.
10. Boyatzis, R. (1982). *The Competent Manager: A Model for Effective Performance*. New York: John Wiley & Sons.
11. Jaques, E. (1990). Creativity and Work. *Madison: International University Press*.
12. Senge, P. (1990). The Fifth Discipline: the Art and Practice of the Learning Organization. *Human Resource Management*, 29, 343-348.

13. Lyle M. Spencer Jr., S. M. (March 1993). *Competence at Work: Models for Superior Performance*. New York: John Wiley & Sons.
14. Dave Ulrich, W. B. (1995). Human resource competencies: An empirical assessment. *Human Resource Management*, 34(4), 473-495.
15. M. D. Mumford, S. J. (2000). Leadership Skills for a Changing World: Solving Complex Social Problems. *Leadership Quarterly*, 11-35.