

A Comprehensive Study on Competency Model in Organizations: A Literature Review

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Abstract

Objective: The objective of this study is to evaluate and connect the research that has been done on Competency Models in a variety of industry sectors such as Maintenance 4.0; Strategic Thinking; Human Resources Management; Construction; Supply Chain and Organizational Change. The goal of this research is to provide a comprehensive understanding of Competency Based Frameworks and how they can help improve an organization's performance and competitive advantage.¹

Purpose: Through this study, we will evaluate how organizations develop, validate, and roll out competency models. We will consider what competencies are most important to modern businesses—such as digital proficiency, innovative capability, emotional intelligence, and strategic thinking. In addition, we want to look into the connections between the use of competency models and the support for increasing efficiency and effectiveness in an organization's performance management system.

Methodology: The qualitative approach to research was used in this paper through an extensive review of 20 research articles published by different writers. Many competency models, frameworks and methodologies have been reviewed as well. The paper integrates and contrasts the findings across multiple domains and schools of thought to provide a comprehensive perspective of competency modeling.

Findings: Data suggests competency models are extremely important tools in helping align individual performance to the goals of the organization. Furthermore, the research shows that current competency frameworks are becoming more and more flexible and dynamic as they incorporate technological change, innovation, and flexibility. Competency-based management systems assist greatly with talent development, organizational change, and sustainable competitive advantage. Additionally, competency models should be integrated into knowledge

management and performance appraisal systems to help increase employee efficiency and organizational productivity as a whole.

Research Limitations: The use of secondary data derived from selected research articles limits this type of research because they are not likely to represent the entire landscape of all types of industries or geographical scope. The generalizability of the results may also be impacted by differing methods used in the research, sample sizes studied, and sector(s) being addressed in each study. In addition, there is no primary empirical validation of any of the articles reviewed in this study.

INTRODUCTION

Organizations in the fast changing global business environment are constantly working towards improvement of their performance, maintaining a competitive edge and keeping pace with technological and structural changes. Creation and execution of competency models is one of the most powerful strategies that have become very crucial in this regard. Competency models are elaborate models that describe the knowledge, skills, abilities as well as behavioral qualities needed to perform effectively in certain positions and organizational contexts (Draganidis and Mentzas, 2006). Competency modeling has over the years, developed to be more than a human resource tool, but a strategic instrument that matches the workforce capability with the organizational goals.

The concept of competency was initially made popular as a way of distinguishing between high-performing and average performers by determining essential behavioral and functional traits. Competency models are in application today in industries in areas such as talent acquisition, training and development, performance appraisal, leadership development and succession planning (Viitala, 2005). The growing sophistication of today organizations through globalization, digital transformation, and innovation has further heightened the necessity of strong and dynamic competency frameworks.

Research articles analysed indicate growing emphasis on competency modelling across numerous sectors. For instance, Maintenance 4.0 competency models will consider digital technologies, automation and data-driven decision making as part of maintenance processes (Benhamza & Hliheli, 2020). With the transition to Industry

²4.0, it is likely that some old competencies will no longer be relevant and new competencies related to technical, analytical and digital skills will be needed. ³ Companies will need to revise their competency frameworks to ensure that they are able to maintain their competitiveness within an increasingly technological workplace.

Similarly, reviewing performance-based competency models as a tool for competitive

advantage provides ways in which companies can use performance metrics that are based upon competencies to enhance productivity and efficiency (Sengupta, 2013). Companies may also use a performance-oriented culture based upon measuring competencies and outcomes to improve accountability and results. This does not only help in enhancing individual performance but also helps in achieving success of the organization.

The other important competency that is emphasized in the literature is strategic thinking. Studies devoted to competency models to evaluate strategic thinking point at the significance of cognition abilities, skills to solve problems, and long-term vision in management (Goldman, 2012; Nuntamanop, 2014). The strategic thinking skill will help leaders to foresee issues, recognize opportunities, and make knowledgeable decisions in a highly unpredictable and dynamic business world. Strategic thinking competencies are thus a necessity of organization sustainability and growth.

Competency models have also become crucial in innovation as a competency area. The open innovation competency models reveal that collaboration, knowledge sharing, and creativity are crucial in an innovation process (Podmetina et al., 2018). Organizations are not only depending on internal sources, but they are also turning to external networks, partnerships, and ecosystems to create new ideas and solutions. This change demands that employees have adaptability, cross-functional teamwork, and communication competencies.

Knowledge management is directly connected to competency development as it is emphasized in the studies devoted to the practical use of the models of knowledge management (Lustri et al., 2007). A well-implemented Knowledge Management System provides organizations with the ability to acquire, share and use knowledge in such a way that employees' proficiencies improve. Use of Knowledge Management combined with a competency framework will create an organization with a culture of learning that supports life-long learning and innovation.

The literature also discusses many of the methodological considerations associated with developing competency models. Research of

Competency Models and the development of measurement tools suggest that systematic and scientific methods are critical in identifying and validating competencies (Suhairom et al., 2014). Some examples of the most frequently used methods of competency measurement are surveys, interviews, behavioral event analysis, and statistical methods to establish the reliability and validity of competency

frameworks. Customized competency-based questionnaires are also developed and this makes competency assessment more accurate (Ryan et al., 2009).

The competency modeling is globalized through the studies like literature review of competency modeling research and practice in China (Dai, 2011). In this study, differences in competency models among various cultural and organizational settings are brought to the fore. It stresses that competency models are not universal and need to be adjusted to the local conditions, industry needs and organizational objectives. This observation is especially true in globalization where organizations work in multinational cultural and geographical settings.

Industry-specific competency models are also important in solving industry-specific problems. Indicatively, competency-based models of construction supervisors in the developing nations are developed based on technical skills, safety awareness and the ability to manage projects (Serpell and Ferrada, 2007). Likewise, human resource manager competency models, which are developed along the paradox theory, show that the balance between the conflicting needs of flexibility and control, innovation and stability, and well-being of employees and organizational performance is required (Nayebpour and Kouhnavard, 2015).

Introduction of competency-based management systems into organizational practices has been the prevalent discussion in the literature. Competency-based management is a systematic application of competency frameworks to every area of human resource management such as recruitment, training, performance evaluation, and career development (Draganidis and Mentzas, 2006). This will provide uniformity and alignment of individual abilities and

organizational goals. Studies on this topic highlight that competency-based management systems help to enhance organizational performance, employee engagement as well as strategic alignment (Vakola et al., 2007).

Leadership development is another aspect of competency modeling that is very important. Critical reviews of the conventional leadership competency models indicate that inflexible and fixed models might not be effective in dealing with the dynamics of contemporary leadership (Patching, 2014). Rather, more flexible and adaptive competency models are required that are able to change with the changing organizational needs. This view points out the need to constantly review and revise competency frameworks.

Based on the infrastructure management context, the studies on the development of generic competencies of infrastructure managers in India highlight the significance of managerial, technical, and behavioral competencies (Shah, 2010). The infrastructure projects are usually characterized by massive investments, complicated stakeholder dynamics and uncertainty. Thus, managers working in this sphere should have a set of competencies that are rather different, as to cope with challenges and guarantee the success of the project.

Multi dimensional competency frameworks are also an idea that has received a lot of attention over the recent years. Research on the managerial performance frameworks note that competencies cannot be considered

“separately rather as interdependent dimensions that work together to affect performance (Cheng et al., 2003). Such dimensions can be technical skills, interpersonal skills, mental skills and emotional intelligence. A combination of these dimensions gives a comprehensive picture of employee competences and facilitates the efficiency of competency models.

The other important competency that is emphasized in the literature is emotional intelligence. The studies on emotional intelligence as competency model of ⁵ interpersonal effectiveness lend importance to the self-awareness, empathy and relationship management in the success of organizations (Kunnanatt, 2008). In the modern

workplace, where teamwork is the order of the day, interpersonal skills are equally valuable as technical competence and hence emotional intelligence is likely to become an important element of competency models.

Their versatility is further shown by their use in specialized competency areas like supply chain management. Research on competency models of supply chain management programs underscores analytical skills, decision-making skills and knowledge of logistics and operations (Sauber et al., 2008). With the increased complexity and globalization of supply chains, demand of skilled professionals in this area is also on the rise.

Another field where competency models have a huge role to play is organizational change. Studies on competency management to support organizational change stress that employees need to acquire new competencies to suit in the changing environments (Vakola et al., 2007). Competency models offer a methodical way of determining the areas of skills that are lacking and create training programs that help in the seamless transition process during change programs.

Although the benefits of competency models are manifold, there are also some challenges and limitations, as mentioned in the literature. The difficulty with the measurement and identification of competencies is one of the main challenges. Differences in definitions, methodologies and contexts in organizations may cause inconsistency in competency frameworks (Suhairom et al., 2014). Moreover, the dynamic business environment demands that competency models should be constantly updated which may be resource consuming.

The other weakness is that competency models may be over-relied on as a universal solution. Competency framework focuses on the proper execution and combined use of the competency model with other elements of your organization (for instance the overall culture, strategy, etc.) only then will your organization achieve the desired impact of these competency models (Vakola, 2009). As such, your organization needs to be systematic in its approach to modeling by considering both the internal and external elements affecting its operation.

Due to the ever changing and evolving nature of the global business environment, new, flexible competency models will need to be established to continually meet the changing criteria of success. Future research and studies in this area should focus on creating new measurement methods, exploring the contributions of new technology, and addressing competency modeling challenges. The results of research can be transformed into the best practices for the successful use of competency models to enable companies to build and maintain sustainable growth and competitiveness.

BACKGROUND

In today's organizations, using competency models to improve employee performance and to help achieve organizational and strategic objectives is becoming increasingly popular. Originally, competency models were simply defined models identifying those characteristics of individuals that lead to successful job performance. However, competency models now represent an extensive classification of the various knowledge, skills, abilities, and behaviours that contribute to successful job performance (Draganidis & Mentzas, 2006).

As a result of globalization and technology, organizations are moving towards a more tailored and dynamic competency framework, rather than the generic one. Research points out that the connection of competencies and organizational strategy and performance results leads to increased efficiency and competitiveness (Viitala, 2005; Sengupta, 2013). The advent of Industry 4.0 has also underscored the necessity of digital and technical skills, especially in such aspects as maintenance and operations (Benhamza and Hlihel, 2020).

It has also been researched that the value of strategic thinking, innovation and knowledge management in competency development is increasing. Decision-making, collaboration, and adaptability competencies are becoming more and more demanded in dynamic business settings (Goldman, 2012; Podmetina et al., 2018; Lustri et al., 2007). Moreover, industry-specific research shows that competency models should be industry-centric, e.g. construction, human resource management,



supply chain management (Serpell and Ferrada, 2007; Nayebpour and Kouhnavard, 2015; Sauber et al., 2008).

The challenges of competency models, even though they have their benefits, include measurement issues and inability to be flexible. Researchers note that competency frameworks must constantly change and be combined with organizational change initiatives (Suhairom et al., 2014; Vakola et al., 2007). In general, competency modeling has developed into an organizational strategic instrument that facilitates organizational effectiveness,

flexibility, and competitiveness in the long term.

LITERATURE REVIEW

Competency modeling is also of recent high importance as a strategic resource in the efforts of increasing the performance and effectiveness of organizations and employees. The initial contributions by Draganidis and Mentzas (2006) focused on management which focuses on competency as a whole process that connects the different functions of human resource like recruitment, training and performance appraisal. On the same note, Viitala (2005) emphasized that managerial competencies should be aligned to organizational objectives and competency development is a necessity to enhance performances and ensure long term success. Dai (2011) also investigated the practice of competency modeling in China and highlighted that cultural and organizational contexts are important in defining competency frameworks and thus that the competency models cannot be applied in a uniform manner.

The literature on competency models development and validation has also been extensively reviewed. Suhairom et al. (2014) emphasized that systematic methods of research were essential in establishing the reliability and validity of competency models, whereas Ryan et al. (2009) paid attention to creating specific competency-oriented questionnaires to measure competencies accurately. Brown (2010) made a contribution of an action research study to show how competency models can be applied practically in an organization, in this case, a power

utility cooperative. All these studies highlight the importance of competency modeling which must have both theoretical and practical utility.

Organizational performance and competitive advantage have also been associated with competency models. Sengupta (2013) created a performance-based competency model that demonstrated that the correlation of competencies and performance result can be a powerful tool to increase productivity and efficiency. A study carried out by Vakola et al. (2007) on competency management within the framework of organizational change revealed that competency frameworks are important in assisting organizations to align to dynamic environments by identifying gaps in skills and enabling development of employees. The results indicate that competency-based methods are necessary to ensure competitiveness in the fast-paced business environments.

A number of researchers have pointed out the significance of strategic thinking competencies. Goldman (2012) has created a model of competencies in strategic thinking assessment, which included the following major attributes: systems thinking, visioning, and problem-solving. On the same note, Nuntamanop (2014) has suggested a new model of strategic thinking competency that focuses on cognitive and analytical skills required to make effective decisions. Cheng et al. (2003) have proposed a multi-dimensional competency-based performance model of managers that includes technical, behavioral and cognitive competencies as they develop

a holistic view of managerial effectiveness. These articles emphasize the importance of strategic and cognitive skills in leadership.⁶

The other critical areas in competency modeling also include innovation and knowledge management. The competencies that Podmetina et al. (2018) considered as crucial to an innovation-oriented organization included collaboration, creativity, and knowledge sharing. Lustri et al. (2007) associated the competency development with knowledge management by noting the importance of the knowledge-sharing practices in improving the capabilities of the employees and organizational learning. These results suggest that the modern

competency models need to consider innovation and competencies based on knowledge in order to be relevant in the current competitive environment.

Specific industry competency models have been designed to meet specific industry needs. In the article by Benhamza and Hlihel (2020), the authors analyzed competency models and their role in Maintenance 4.0 and highlighted the importance of digital, technical, and analytical skills in automated and data-driven settings. Serpell and Ferrada (2007) have come up with a competency based model of construction supervisors in developing nations with emphasis on technical skills, safety consciousness, and project management skills. On the same note, Sauber and colleagues (2008) developed a competency model in supply chain management, emphasising on analytical and decision-making skills. Nayeypour and Kouhnavard (2015) developed a competency model of human resource managers on the basis of the paradox theory, where the human resource managers should focus on conflicting demands within the organization. Shah (2010) listed generic skills needed by infrastructure managers in India such as managerial, technical and interpersonal skills. These research papers have shown that competency models should be industry-specific to be useful.

Emotional and behavioral competencies have become prominent within the past few years as well. Kunnanatt (2008) highlighted emotional intelligence as one of the most important competencies of interpersonal effectiveness which encompasses self-awareness, empathy and relationship management. These are especially competencies that are vital in working environments that are collaborative, where communication and teamwork are key to success. Emotional intelligence has been incorporated in competency frameworks that improve individual and organizational performance.

Although competency models have many strengths, there are limitations that some researchers have expressed with regard to the models. Patching (2014) critically reviewed the concept of the classical leadership competency models and discussed that they might be too fixed and unable to reflect the dynamism of leadership in contemporary organizations. According to this view,

updating competency frameworks will be extremely important to keep them relevant in ever-changing business conditions. Additionally, Suhairom et al. (2014) pointed out issues with the measurement and standardization of competencies and will require more reliable and flexible methods.

Overall, based on the literature, there is evidence that competency models have now evolved into integrated models that can assist with the development of employee skills and improving overall performance as an organization and achieving the strategic goals of the organization. They have been extended to cover a broad spectrum of competencies such as technical, strategic, behavioral and emotional aspects, which is a growing complexity of modern organizations. Nevertheless, the success of competency models can be determined by how well they can adjust to varied environments, introduce new competencies and match organizational goals and strategies.

Impact Of Competency Model On The Performance Of The Organization

Reviewed literature clearly shows that competency models play a major and beneficial role in organizational performance as they align the ability of the employees with the strategic objectives and enhance the overall efficiency. Management systems that are based on competencies combine the critical human resource activities like recruitment, training, and performance appraisal, and make sure that the appropriate skills and behaviors are cultivated within the company (Draganidis and Mentzas, 2006). The alignment assists organizations to make better use of their human resource hence improved productivity and improved decision-making.

Among the most significant effects of competency models, there are the possibility to connect the performance of individuals with the organizational goals. Sengupta (2013) reiterated that performance-related competency model establishes a direct relationship between employee competencies and quantifiable outcomes that lead to enhanced efficiency and competitive advantage. Employees will be more focused and motivated when they clearly know the competencies needed



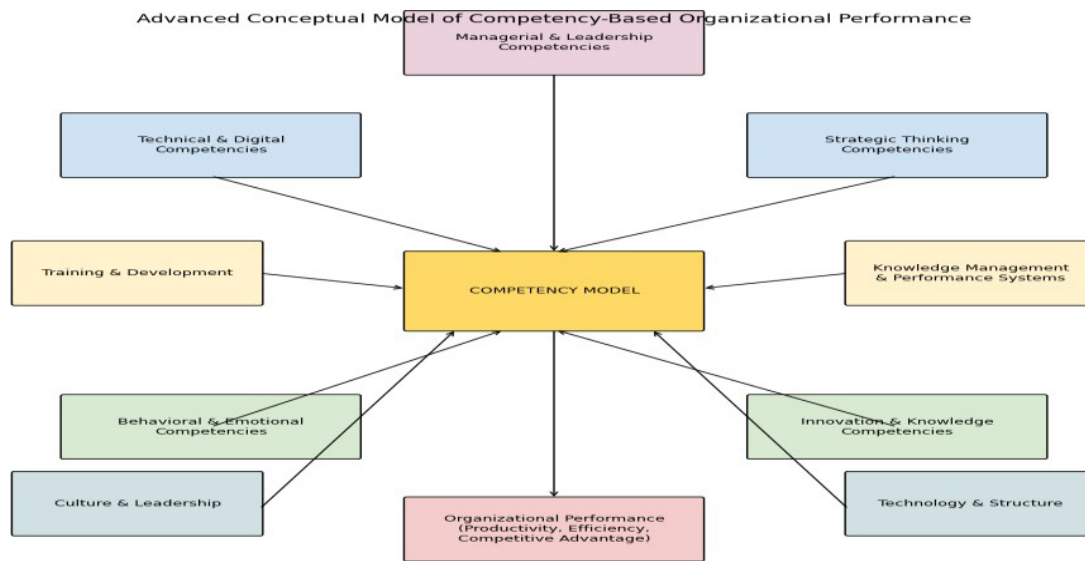


Figure : Advanced Conceptual Model of Competency-Based Organizational Performance.

to be successful and this will eventually enhance performance of the organization.

Competency models are also important in facilitating change and flexibility within organizations. Vakola et al. (2007) pointed out that competency management assists organizations to recognize the skill shortages and to train employees to work in the evolving business climate. In fast-changing and unpredictable environments, companies that possess clear competency models are in a better position to adapt to the changes in technology and the market and thus remain competitive.

The other significant effects are the improvement of strategic thinking and managerial performance. Two studies, by Goldman (2012) and by Nuntamanop (2014), demonstrated that competency models that focus on strategic thinking improve managerial competencies such as decision making, problem-solving, and long-term planning. This results in increased organizational strategies and performance outcomes. On the same note, Cheng et al. (2003) pointed out that 'multi-dimensional competency frameworks can lead to the overall managerial performance by incorporating technical, cognitive, and behavioral competencies.

Another aspect that is brought out in the literature is the contribution of competency models to innovation and knowledge sharing. Podmetina et al. (2018) have shown that teamwork, creativity,

and open innovation competencies are critical to organizational innovation. This was also supported by Lustri et al. (2007) who indicated that the combination of competency models and knowledge management systems encourages continuous learning and skill acquisition that have a positive effect on organizational performance.

The positive effect of competency models is also proved by sector-specific studies. Benhamza and Hlihel (2020) demonstrated that competency models enhance operational efficiency in Maintenance 4.0 environment through the integration of digital and technical skills. Serpell and Ferrada (2007) have discovered that competency-based frameworks can improve performance in construction projects through enhanced safety, productivity and project management. On the same note, Sauber et. al. (2008) emphasized that competency models within the supply chain management enhance the coordination, decision making and efficiency.

Moreover, emotional intelligence is a behavioral competency that has a huge impact on performance in an organization. Kunnanatt (2008) pointed out that such abilities as self awareness, empathy and relationship management enhance team work, communication and effectiveness of leadership resulting to improved outcomes in an organization.

Nevertheless, there is also literature that implies that competency models should be properly

implemented and updated in order to be effective. Patching (2014) stated that strict competency models can be inflexible and cannot keep up with the evolving requirements of an organization.

Conceptual Framework

The conceptual model shows the connection between competency models and organizational performance by incorporating the key variables that were found in the chosen research papers. (Figure 1) The main takeaway of the model is that it focuses on different types of competencies: technical, strategic, innovation-related, behavioral, and managerial competencies. These are the skills which are the most crucial abilities that the employees should have in order to work in the contemporary organizations. It has been found that technical competencies are especially relevant within the technology-driven setting like Maintenance 4.0, whereas strategic thinking competencies develop decision-making and long-term planning (Benhamza and Hliheli, 2020; Goldman, 2012).

The model also emphasizes the mediating variables like training and development, knowledge management systems, and performance management practices. These are some of the mechanisms by which competencies are built, developed and applied in organizations. An example is training programs, which enable employees to gain the required skills, and knowledge management systems that allow sharing and usage of knowledge, which translate to the development of better competencies (Lustri et al., 2007). On the same note, performance management systems make sure that the competencies are aligned with the goals of the organization hence enhancing efficiency and productivity (Sengupta, 2013).

The main outcome of the model is organizational performance which is reflected in terms of increased productivity, innovation, efficiency and competitive advantage. According to the literature, organizations that have effectively developed competency models are more likely to realize their strategic goals and be successful in the long term (Draganidis and Mentzas, 2006).

Other moderating variables included in the model are the organizational culture, leadership

style, changes in technology and the organizational structure. These aspects determine the power and nature of the competencies

and performance relationship. To give an example, an effective organizational culture makes competency development initiatives more effective whereas the fast technological changes necessitate constant competency update (Dai, 2011). In the same way, leadership is essential in the process of introducing competency-based practices and an environment that is performance-oriented (Patching, 2014).

In general, the conceptual model shows that the competency models do not directly affect organizational performance but act via different organizational processes and are affected by contextual factors. This synergistic way of doing things allows one to have a full picture on the impact of competencies on the success of an organization.

RESEARCH METHODOLOGY

The given research takes the qualitative and exploratory research design as it attempts to investigate the notion of competency modeling and its effects on organizational performance. The study largely relies on secondary data that has been gathered through a well chosen sample of 20 research studies in renowned journals, conference proceedings and scholarly books. These journals address various aspects including Maintenance 4.0, strategic thinking, human resource management, innovation, knowledge management, emotional intelligence and competency-based management systems.

A method of systematic literature review has been embraced in order to have a systematic and detailed analysis of the studies selected. The research papers have been chosen on the basis of their relevancy to competency modeling, contribution to theory and practice as well as applicability to organizational performance. The selection was based on key themes, abstracts, and full-text articles review in order to include high-quality and relevant studies.

The research paper uses thematic analysis method, under which the literature gathered is divided into key themes that include the



types of competencies, process of competency development, linkage of performance, application of competency in specific sectors and challenges in competency modeling. The approach aids in determining patterns, similarities and differences among different studies. Additionally, a comparison has been made of differences in competency models across various sectors (Construction, Supply Chain, Human Resource Management, and Infrastructure).

In order to enhance the level of analysis, various research article findings from the above authors will be incorporated into a conceptual framework that will represent the relationship between the competency model and organisational performance. This framework will contain independent variables (Competencies), Mediating Variables (Training, Knowledge Management), Moderating Variables (Organisational culture, Leadership), and Dependent Variables (Organisational Performance).

However, this study does have a limitation with regards to using only secondary data and lacks primary data collection methods (i.e., surveys or interviews) which would provide empirical validation; therefore the results of this paper are derived from interpretation and synthesis of existing literature rather than empirical validation. Nonetheless, a sufficient amount of research articles have been used to provide a high-quality and comprehensive overview of the topic to help remedy this weakness.

FINDINGS

The selected research articles discussed provide numerous learning opportunities regarding how competency models affect organisations' performance and how they may or may not impact them. The key conclusion is that competency models serve as tools that allow organisations to align their employee capabilities with the organisational objectives. The organizations can determine the requisite knowledge, skills and behaviors hence making sure that the employees work effectively leading to heightened productivity and efficiency.

The other significant finding is that competency models and performance management systems

have a high correlation. Studies indicate that performance-based competency models enable organizations to better and objectively evaluate the performance of employees. This fit will help in the identification of high performers, address skill gaps, and improve overall performance of the organization. Competency-based approaches can therefore help in the attainment of competitive advantage.

The study also points out the increasing significance of the competencies of strategic thinking in the position of a manager. Managers who have high level of analytical, problem solving and decision making skills are more apt to tackle complicated business scenarios. The competencies assist the organizations in anticipating the obstacles that could be encountered in the future, strategize well and sustain long term growth.

Moreover, the paper concludes that digital and technical skills have gained more significance in the Industry 4.0 and Maintenance 4.0 environment. As new technologies are being incorporated into the production process, including automation, artificial intelligence, and data analytics, employees will be forced to constantly improve their knowledge. Organizations that make investment in development of these competencies are more likely to achieve efficiency in operations and innovation.

The other significant finding is the role in which innovation and knowledge management competencies can be used to enhance organizational performance. Competencies involved in sharing knowledge, being creative, and collaborating are all part of building a culture of lifelong learning and innovation. Employee performance increases as a result but so does the ability of an organization to remain competitive in today's ever-changing market.

The findings reveal that the best way to implement competency models is through a combination with training and development programs, knowledge management systems, and processes that support organizational learning. These moderating variables also enhance the value of the competencies that are developed and used.⁹

RESEARCH GAPS

Despite having been studied extensively by research, there continue to exist numerous critical gaps in regard to competency modeling. One of the most significant gaps is the lack of integration across all the different forms of competencies. Most studies thus far have focused on looking at competencies on an individual level (such as technical vs. strategic vs. behavioral), while there has been limited research into how to create an all-encompassing, integrated model that incorporates and combines all these dimensions into a single model.

Another major gap is related to the impact new technologies are having on competency requirements.

Research reveals that there are many gaps in the existing research on competency models and how these models are applicable across cultures and industries. Most of the current literature focuses on specific industries or geographic regions, and therefore, it is difficult to generalize these results to other industries or regions. There needs to be more cross-industry and cross-cultural research so that competency models that are created can be used by multiple industries.

Another gap is the reliance on qualitative research methods. Most research on competency models is qualitative in nature, such as literature reviews and case studies. Additional empirical quantitative research that uses statistical analysis to determine the relationship between competency models and performance outcomes would be useful. This type of research would provide more credible evidence for the validity of findings generated by prior research.

There has been a lack of analysis that looks at how competency models are used by organizations. Researchers have done studies about how to create competency models and how much value they can bring, but hardly any researchers have looked at how organizations face problems when implementing their competency models (for example, resistance to change, low resources, and low levels of training). Today, businesses are working in very dynamic environments and this is creating a need for organizations to have flexible and adaptable competency models. However, most of the

competency models in the marketplace are fairly rigid/static and they do not consider how rapidly all aspects of a business (technology, marketplace, organizational structure, etc.) are changing and evolving. Therefore, research must continue to develop new competency models that are dynamic and can be updated regularly as new realities are created.

Employee perspectives and participation in competency modeling is an under-researched area. More research is needed to better understand how employees perceive competency models and the effects of this perception on their motivation and performance.¹⁰

CONCLUSION

This article will provide an overview of the growing consideration of competency models as strategic tools to improve organizational performance within a dynamic and competitive business context. Based on an analysis of 20 research studies, competency models clearly align employee competencies with the overall goals of the organization, leading to increased efficiency and productivity, and enhancing the overall performance of the organization.

Research demonstrates that traditional competency models have evolved beyond simply focusing on technical competency development. In addition to traditional technical competencies, today's competency models also focus on strategic thinking, innovation, knowledge management, and other types of competencies (as an example, emotional intelligence). The above described competencies are foundational to organizations remaining competitive in an ever-changing technological environment created by the advent of Industry 4.0 and the digital transformation across all areas of the workplace; therefore, organizations that develop and utilize strategies to increase employee mastery of these competencies will have a sustainable competitive advantage. The results from this research study also indicate that organizations can use competency models effectively by integrating them within the core systems of their organization and providing key support for core business processes (e.g., training



and development, performance management, knowledge management). These core systems represent mechanisms of facilitation used to develop and apply competencies, thereby increasing their effectiveness as a means of enhancing the organization's performance.

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