

# Human Resources in the Knowledge Economy: Training and Developing Modern Management Skills



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**ABSTRACT:** This paper investigates the role of human resources in the knowledge economy and the methods for training and developing modern management skills. The study analyzes training models and clarifies the needs and solutions for enhancing management capabilities. The results indicate that investing in human resource training and development is a crucial factor for businesses to maintain competitive advantages in a globalized and high-tech economy.

**KEYWORDS:** Modern Human Resource Management, Knowledge-Economy, Management Skills Development, Human Resource Training and Development

## 1. INTRODUCTION

In the era of globalization and rapid technological advancements, the knowledge economy has emerged as a crucial driver of economic progress. This shift emphasizes the primacy of knowledge and information over traditional resources like natural reserves or manual labor. Human resources are now viewed as knowledge bearers, necessitating the urgent development of modern management skills. Information technologies are pivotal in this landscape, requiring continuous education and self-improvement to manage them effectively. The integration of information technology in enterprise management, particularly in human resource management models, has seen significant advancements, propelled by the technological revolution and globalization. Ultimately, the quality of human resources is paramount for sustainable development in a knowledge-based economy.

To effectively analyze and enhance management skills in the knowledge economy, it is crucial to consider factors such as generic skills for employability (Bejinaru, 2013), the transformation of knowledge management in response to the digital economy (Roshchin et al., 2022), and the development of cloud computing skills to promote knowledge application (Sadik & Albahiri, 2020). Additionally, focusing on essential skills like basic knowledge, communication, digital proficiency, vocational skills, and leadership is vital for educational institutions to align their programs with the needs of the knowledge economy (Belooshi & Ma'amari, 2020). Understanding how students acquire entrepreneurial skills within the context of a knowledge economy is also essential for shaping training programs (Bejinaru, 2018). By synthesizing these perspectives, businesses and training institutions can tailor their approaches to improve human resource quality and meet the dynamic demands of the labor market.

This research hopes to improve human resource quality and promote economic development - a knowledge economy - in Vietnam by focusing on training and developing modern management skills.

## 2. LITERATURE REVIEW

### 2.1. Concept of the knowledge economy

As defined by Snellman (2004), the knowledge economy is characterized by knowledge-intensive activities that contribute to rapid technical and scientific progress, acknowledging the swift obsolescence that characterizes this environment. (Alhasadi & Demirel, 2020). It also highlights the role of knowledge-intensive activities in accelerating technological advancements within the economy. (Asongu & Kuada, 2020) Emphasize that in a knowledge economy, economic prosperity is intricately linked to the quality, quantity, and accessibility of information available rather than traditional means of production.

Furthermore, (Menezes et al., 2021) underscore the essence of intellectual capacities in the knowledge economy, emphasizing that raw materials are no longer limited to physical resources but encompass immaterial and non-consumable

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resources. (Muhammad, Ali, & Iliya, 2015) Further reinforce this perspective by highlighting how knowledge drives economic growth, employment, and wealth creation in a knowledge-based economy.

In essence, the knowledge economy represents a transformative phase in which knowledge, innovation, and information are the primary drivers of economic development and prosperity. It signifies a departure from traditional production-centric models and a more dynamic and knowledge-driven approach to fostering growth and competitiveness.

The Organization for Economic Co-operation and Development (OECD) further elaborates on the concept, describing knowledge-based economies as fundamentally reliant on producing, distributing, and utilizing knowledge and information (Gangi, 2017). This definition aligns with the notion that in a knowledge-based economy, knowledge serves as a primary driver of economic progress, employment generation, and wealth creation (Muhammad et al., 2015).

Moreover, the literature underscores that a knowledge-based economy is distinguished by its heavy reliance on intellectual capital in economic production (Husna, 2023). This shift towards intellectual capabilities over physical inputs or natural resources is a defining feature of such economies (Yokhaneh & Baghoumian, 2014). Additionally, the role of universities in fostering a knowledge-based economy is highlighted, emphasizing their importance as critical players in advancing modern economies (Salem, 2014).

The literature emphasizes the critical role of reflective teaching in enhancing instructional delivery within a knowledge-based economy, particularly in the context of education, particularly technical and vocational training (Oviawe, 2020). This underscores the importance of pedagogical approaches that align with the requirements of an economy driven by knowledge and innovation.

The knowledge economy represents a transformative stage in economic development where knowledge and information are paramount. It underscores the critical role of education, training, and intellectual assets in driving productivity, economic growth, and value creation.

### **2.2. Human resources in the knowledge economy**

In the context of the knowledge economy, human resources play a pivotal role in driving sustainability and business success (Zubović et al., 2015). This shift towards a knowledge-based economy has highlighted the significance of human capital over traditional physical and financial resources (Veselinović et al., 2022). Companies operating in competitive markets rely heavily on the organization and management of human resources to maintain competitiveness (Zubović et al., 2015). The sustainable development of nations in a knowledge-based economy is intricately linked to the quality and development of human resources (Kojić et al., 2020). As the nature of work evolves in the contemporary economy, personal resources have emerged as a critical factor in enhancing job engagement for knowledge workers (Toth et al., 2019).

In the era of the digital economy, enterprise competitiveness is closely tied to effective human resource management practices (Liao & Zhang, 2022). The knowledge economy presents vast opportunities as human creativity and capacity for innovation are considered limitless resources (Eftimoski & Milenkovski, 2012). Organizations striving to achieve their goals require competent, knowledgeable, and productive human resources to drive performance and success (Nursiani et al., 2023). In a knowledge economy, knowledge is the primary resource, and the innovation capacity of employees serves as a critical competitive advantage (Dražković et al., 2020). This emphasis on intellectual capabilities over physical inputs characterizes the essence of a knowledge economy (Powell & Snellman, 2004).

Technological progress in a knowledge economy underscores the critical role played by human resources in driving innovation and economic growth (Csugány, 2018). The transition toward knowledge economies necessitates a shift toward intellectual capabilities as the primary driver of success (Abu-Shawish et al., 2021). The interplay between knowledge, human capital, and economic growth is evident in developing countries, where investments in R&D, human resources, and technology diffusion are crucial for progress (Poorfaraj & Keshavarz, 2011). Initiatives like the Human Resource Development Council aim to enhance labor productivity, technology transfer, and innovation through lifelong learning and skill development (Awang et al., 2010).

The concept of human capital has long been recognized as a fundamental element influencing innovation, technology adoption, and overall economic prosperity (Madariaga, 2022). The transformation towards a knowledge economy underscores the need for advanced skills, continuous learning, and a focus on intellectual capabilities to thrive in a competitive global landscape. In this paradigm, human resources are a support function and a strategic asset that drives organizational success and sustainability. The ability to attract, develop, and retain top talent becomes a critical differentiator for companies seeking to excel in the knowledge economy.

### **2.3. Modern management skills**

In the realm of the knowledge economy, modern management skills have evolved to encompass a diverse array of elements crucial for organizational success. The interplay between strategic thinking and competitive advantage is a focal point in the

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research (Dixit et al., 2021). The study establishes a direct link between creativity, corporate culture, knowledge management, and strategic thinking, showcasing how these factors synergistically contribute to gaining a competitive edge in the market. This connection underscores the strategic importance of cultivating a conducive environment that nurtures creativity, values knowledge management, and fosters a culture that supports strategic thinking. Additionally, (Gross, 2017) explores the relationship between innovative behavior and strategic thinking, emphasizing strategic thinking as a dynamic capability that serves as a competitive tool. By understanding the factors influencing strategic thinking, organizations can harness this capability to drive innovation and maintain a competitive edge in dynamic market environments.

Emotional intelligence, another critical aspect of modern management skills, has garnered significant attention in the literature. Studies by (Lysytsia et al., 2020) and (Halder, 2023) delve into emotional intelligence's gender-specific and sector-specific implications in HR management and managerial effectiveness, respectively. These studies highlight how emotional intelligence can influence decision-making, conflict resolution, and overall managerial effectiveness, underscoring its relevance in contemporary management practices. Furthermore, the research by (Anjum et al., 2015) emphasizes the cultural implications of emotional intelligence, showcasing how emotionally intelligent managers are more inclined towards engaging in innovative entrepreneurial activities. This cultural perspective underscores the universal relevance of emotional intelligence in driving managerial success and organizational innovation.

Emotional intelligence is crucial in shaping organizational dynamics and leadership effectiveness in educational leadership. Amelia (2021) explores the impact of emotional intelligence management on leadership quality, emphasizing how emotional intelligence skills can enhance leadership capabilities and contribute to organizational goal attainment. This underscores the multifaceted influence of emotional intelligence on leadership effectiveness across diverse organizational contexts.

The evolving landscape of the knowledge economy necessitates a nuanced understanding of modern management skills, encompassing elements such as emotional intelligence, strategic thinking, and data-driven decision-making. By integrating insights from reputable sources, it is evident that modern managers must possess a diverse skill set to navigate complex organizational challenges, foster innovation, and drive sustainable competitive advantage. Emotional intelligence and strategic thinking are pivotal to modern management skills, shaping managerial effectiveness, organizational performance, and leadership quality in diverse contexts. As organizations strive to thrive in the knowledge economy, cultivating these skills among managers becomes imperative for long-term success and strategic growth.

### **2.4. Human resource training and development**

Human resource training and development are crucial in enhancing an organization's competitiveness in the knowledge economy. The studies by (Chalise, 2020), (Nwali & Adekunle, 2021), and (Binh, 2021) underscore the critical role of human resource development in enhancing productivity, efficiency, and institutional governance. They emphasize that organizations must invest in training and development to stay abreast of industry best practices and remain competitive globally.

Furthermore, research by Burrichter et al. (2022) highlights the importance of modern technology in human resource management for sustainable development. Leveraging technology in human resource management is essential for organizational success and growth in the current business landscape.

The synthesis of these references underscores the vital role of human resource training and development in improving organizational competitiveness in the knowledge economy. Organizations can enhance productivity, efficiency, and overall performance by aligning training programs with business needs, leveraging technology, and investing in employee development, thereby gaining a competitive edge in the global market.

### **2.5. Modern management skills training and development model**

In modern management skills training and development, following a structured model encompassing various vital stages is imperative. One of the widely recognized models in training and human resource development is the ADDIE model, which stands for Analysis, Design, Development, Implementation, and Evaluation. This model provides a systematic framework for designing and implementing effective training programs (Sayed & Agha, 2015).

Moreover, Kirkpatrick and Kirkpatrick (2006) shed light on evaluating training effectiveness through different levels. They propose a four-level model for training evaluation, which includes Reaction, Learning, Behavioral, and Results. This model allows organizations to assess not only the immediate reactions of participants to the training but also the extent of knowledge and skills acquired, the application of these skills in the workplace, and the overall impact of the training on organizational outcomes. By incorporating these evaluation levels, organizations can understand the effectiveness of their training programs and make informed decisions for future training initiatives (Alsalamah & Callinan, 2021).

While the Kirkpatrick model has been widely used for training evaluation, Cahapay (2021) points out some limitations of its application in higher education evaluation. The historical context of the Kirkpatrick model was to aid managers in systematically

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accounting for outcomes among employees and organizational systems. However, in the context of higher education, where the goals and outcomes may differ, the model's applicability may be constrained. This highlights the importance of considering training programs' specific context and objectives when selecting an evaluation model (Cahapay, 2021).

In a practical application of training needs assessment, Jiyenze et al. (2023) conducted a study to identify the actual training needs in Tanzania related to health management, leadership, and governance capacities. Through thematic analysis and qualitative research, the study aimed to determine the expressed training needs of health managers, essential competencies for managerial roles, and topics crucial for management, leadership, and governance training. This approach underscores the importance of conducting thorough needs assessments to tailor training programs to the specific requirements of the target audience (Jiyenze et al., 2023).

Sahni (2020) delved into assessing managerial training effectiveness using the Kirkpatrick framework. By investigating the impact of managerial training through the lens of the Kirkpatrick model, the study aimed to evaluate the training program's effectiveness in enhancing managerial skills and knowledge. This research contributes to the body of knowledge on evaluating training outcomes and underscores the value of using established models like Kirkpatrick for assessing training effectiveness (Sahni, 2020).

In the context of developing countries like Ecuador, it highlighted the need to assess statistical knowledge and training needs among business professionals. The study emphasized the importance of equipping business managers with the necessary statistical skills to support decision-making processes effectively. This underscores the significance of identifying and addressing specific skill gaps through targeted training interventions to enhance managerial capabilities in diverse settings (Mosquera-Gutierrez, 2024).

It furthermore explored kindergarten teachers' perceptions of management training issues and needs. The study revealed that teachers viewed management training as a critical factor for effectiveness and expressed a preference for a combination of introductory and periodic training organized by educational institutions and policy bodies. This underscores the importance of understanding the perspectives and preferences of training participants when designing and delivering management training programs (Παναγιωτόπουλος et al., 2019).

Glomb et al. (2018) conducted a needs assessment for simulation training for prehospital providers in Botswana, focusing on improving assessment and clinical management skills in high-risk situations. The study demonstrated the effectiveness of simulation-based training in enhancing providers' skills, particularly in challenging scenarios. This highlights the value of utilizing innovative training methods like simulation to address specific skill requirements in specialized fields such as emergency medical services (Glomb et al., 2018).

Vishwakarma and Tyagi (2017) examined the post-reform training needs of frontline managers in Indian power distribution companies. By assessing managers' perceptions of training-related factors such as clarity, budget, scheduling, and resource availability, the study aimed to identify areas for improvement in training programs. This research underscores the importance of aligning training initiatives with frontline managers' specific needs and expectations to enhance their performance and effectiveness in their roles (Vishwakarma & Tyagi, 2017).

In a healthcare setting, Omondi (2020) investigated the influence of training programs on the performance of health workers at Kakamega County General Hospital. The study utilized purposive and stratified sampling methods to assess the impact of training on different categories of health workers. By evaluating the relationship between training programs and performance outcomes, the research aimed to provide insights into the effectiveness of training interventions in improving healthcare delivery. This highlights the critical role of training in enhancing the skills and performance of healthcare professionals (Omondi, 2020).

Overall, the synthesis of these studies underscores the importance of structured training models, comprehensive needs assessments, and rigorous evaluation mechanisms in designing practical management skills training and development programs. By incorporating elements such as training needs assessment, program design, implementation, and evaluation, organizations can ensure that their training initiatives are targeted, impactful, and aligned with the specific requirements of their workforce and organizational goals. Additionally, using established evaluation models like the Kirkpatrick model enables organizations to measure the effectiveness of training programs across different levels and make data-driven decisions to enhance training outcomes and organizational performance.

The literature review indicates that human resources in the knowledge economy need to be equipped with specialized knowledge and modern management skills. Continuous training and development are crucial to ensure that the workforce can meet the increasingly demanding requirements of the economy. Effective training models and the integration of technology with traditional training methods will enhance the quality of human resources, thereby contributing to the sustainable development of businesses and the economy.

### 3. DISCUSSION

#### 3.1. Result evaluation

The demand for modern human resource management skills is rising in the current knowledge economy. This emphasis on digital skills is supported by (Amalia, 2024), who discusses how adopting digital-based HR technologies like HRIS and artificial intelligence can effectively manage and motivate the workforce, albeit facing challenges such as technology integration complexity and cultural changes.

Moreover, (Taha, 2024) underscores the significant correlation between human resource skills and organizational innovation, indicating that organizations aiming for innovation rely on these skills to enhance products. (Lin, 2024) further emphasizes the profound changes in human resource management due to digitalization, especially in the context of organizational management evolution. (Wang, 2024) delves into the impact of employees on enterprise development within innovative and entrepreneurial enterprises, stressing their critical role in driving organizational success.

Strategic human resource management is crucial in addressing business challenges and long-term objectives, as discussed (Alsaadat, 2019). It also highlights the increasing demand for digital skills in HR, aligning with the need for digitalization in the field. Additionally, Sutrisno (2024) points out the crucial role of human resources in the success of digital business strategy implementation, especially in SMEs.

The relationship between strategic thinking and strategic human resource management is evident in the works (Alomari, 2020) and (Bahrapour et al., 2021), emphasizing the importance of good HR management in enhancing company skills and values. Furthermore, (Parsehyan, 2020) discusses how HR management can contribute to organizational innovation through mechanisms that drive change.

The literature supports the notion that in the knowledge economy, modern human resource management skills, particularly digital skills, strategic thinking, and flexible leadership abilities, play a pivotal role in enhancing organizational productivity, efficiency, and innovation.

#### 3.2. Meaning and practical applications

In today's rapidly evolving business landscape, training and developing modern management skills are crucial for businesses to maintain competitiveness and adapt to market changes (Alabdulaziz et al., 2022). Training programs should prioritize enhancing digital capabilities, data analysis skills, and project management abilities to align with the demands of the knowledge economy (Alabdulaziz et al., 2022). Educational institutions also play a vital role in preparing students for the future workforce by updating and innovating curricula to ensure students acquire the necessary skills (Ashraah & Yousef, 2020). The integration of theory and practice, coupled with the application of modern educational technologies, is essential for students to meet the requirements of the new economy (Ashraah & Yousef, 2020).

Research emphasizes the importance of incorporating knowledge economy skills into educational curricula to equip students with the competencies needed in the modern workforce (Belooshi & Ma'amari, 2020). It is recommended that students, especially at the master's level, receive training on knowledge economy skills and stay abreast of recent developments to enhance their preparedness for the evolving job market (Alabdulaziz et al., 2022). Additionally, the study on knowledge economy skills in Oman highlighted the significance of basic, life and professional, digital, interpersonal, and communication skills for future education (Belooshi & Ma'amari, 2020).

Furthermore, the study on entrepreneurial skills needed in the knowledge economy underscores the essential contribution of economics and business education to developing entrepreneurial skills among students (Bejinaru, 2018). This highlights the importance of educational institutions offering programs that foster entrepreneurial abilities to meet the demands of the evolving economy (Bejinaru, 2018). Moreover, the application of modern information systems in educational courses has been shown to enhance the productivity of the educational process and positively impact students' knowledge levels and the development of crucial competencies (Tukshumskaya et al., 2020).

Incorporating modern technology into teaching methods has become prevalent in colleges and educational institutions, indicating a shift towards leveraging technology to enhance the learning experience (Ghory & Ghafory, 2021). The utilization of information and communication technologies in innovative teaching methods has been recognized as a tool for socio-economic development, emphasizing the importance of technology in advancing educational practices (Nemchenko et al., 2021). Additionally, the study on modern communication technologies in professional education highlights how these technologies form the foundation for activating the educational process and improving graduates' competency levels (Smirnova et al., 2019).

The circular economy skills play a significant role in the regional dimension, emphasizing the importance of a comprehensive approach that integrates theoretical methods with empirical analysis (Nikitaeva, 2024). This holistic approach to developing skills aligns with the need for a well-rounded skill set encompassing various aspects of the modern economy (Nikitaeva, 2024).

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Moreover, understanding the skill provision in the gig economy from a network perspective sheds light on the implications for gig economy workers and platforms, emphasizing the importance of adapting skills to the changing nature of work (Huang et al., 2019).

In conclusion, the evolving landscape of the knowledge economy necessitates a proactive approach from businesses and educational institutions to equip individuals with the skills required to thrive in a rapidly changing environment. By focusing on digital capabilities, data analysis skills, project management abilities, and entrepreneurial skills, businesses, and educational institutions can contribute to developing a highly skilled workforce ready to meet the challenges of the new economy.

### 3.3. Limitations of the study

Although the study produced many significant results, some limitations still exist. First, the scope of the study mainly focused on a few businesses and educational institutions in large cities, which may limit the ability to generalize the results to the entire country. Second, due to limited time and resources, the research mainly used qualitative methods, which did not fully demonstrate the quantitative aspects of the problem. To overcome these limitations, future studies should expand the scope of investigation to different regions and apply quantitative research methods to have a more comprehensive view. In addition, the use of advanced data analysis tools will also help improve the accuracy and objectivity of research results.

### 3.4. Recommended for the future

Based on the results and limitations of the current study, several recommendations for future research include:

Expanding the scope of research to different regions to assess the feasibility and effectiveness of modern management skills training programs in more diverse contexts.

I am applying a mixed-methods research approach, combining qualitative and quantitative methods to provide a more comprehensive and in-depth understanding of the needs and effectiveness of management skills training in the knowledge economy.

It is conducting further studies on the influence of cultural, social, and technological factors on the development of modern management skills, thereby offering tailored training solutions that align with the specific characteristics of each region and industry.

These recommendations aim to enhance the current study and open new research avenues, contributing to the improvement of training quality and human resource development to meet the increasing demands of the knowledge economy.

## 4. CONCLUSION

This study elucidates the essential role of human resources in the knowledge economy, particularly in the training and development of modern management skills. The research findings affirm that in a globalized and digitized economy, possessing a high-quality workforce with modern management skills is crucial for enterprises to maintain and enhance their competitive position.

Firstly, the study identifies and clarifies the modern management skills necessary for human resources in the knowledge economy. These skills include leadership, strategic thinking, project management, and proficiency in using digital technologies. These skills not only improve the operational efficiency of enterprises but also foster innovation and creativity.

Secondly, the study demonstrates that investing in human resource training and development is a long-term strategy that brings sustainable benefits to enterprises. Training programs designed to align with the practical needs of businesses and market development trends will help employees enhance their capabilities and be ready to face new challenges.

Lastly, the study emphasizes applying advanced and flexible training methods. These methods include online learning, modular training, and continuous training programs. This not only saves costs but also optimizes the enterprise's time and resources.

These research findings suggest that training and developing modern human resources management skills is a decisive factor in the success of enterprises in the knowledge economy. To achieve this, enterprises must have a clear training strategy, invest reasonable resources, and apply effective training methods.

The findings from this study provide practical suggestions for businesses and managers in designing and implementing human resource training programs. Additionally, the study opens up new research directions on the factors influencing the effectiveness of training programs in the ever-developing knowledge economy.

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