

THE IMPACT OF MANAGEMENT COMPETENCIES, CRITICAL REFLECTION, AND INTERCULTURAL SKILLS ON HUMAN RESOURCE DEVELOPMENT AND BUSINESS SUCCESS IN THE DIGITAL AGE

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ABSTRACT

This study investigates the relationship between various crucial competencies in the contexts of management, education, and business, particularly in the digital and globalized era. The findings reveal a positive correlation between the independence and competencies of university management teams in distance education. Additionally, critical reflection skills and intercultural competencies are shown to be vital for human resource development (HRD), enhancing communication, collaboration, creativity, and innovation in the context of Industry 4.0. The study employs a qualitative method, using NVIVO software for data coding and thematic analysis. The ability to communicate, collaborate, innovate, and be creative plays a significant role in shaping an effective organizational culture and strategic planning, including specific competencies. These findings underscore the importance of various competencies, including critical reflection and intercultural understanding, in supporting the autonomy and competencies of management teams in distance education. The research emphasizes the necessity of comprehensive competency development to tackle the challenges of the digital and global era.

KEYWORDS: Management Competencies; Critical Reflection; Intercultural Competence; Digital Era; Industry 4.0; Business Performance

INTRODUCTION

The following research, [1] the focuses on the development of competency-based human resources (HR). Utilizing secondary data, the study adopts a qualitative strategy through a literature review approach. The findings highlight the importance of competency-based HR development for organizational or business success in the digital age and the rapidly evolving technological landscape. The study examines the impact of technology and digitization on competency-based HR development, the challenges organizations face in cultivating HR in the digital era, successful HR development strategies, the competencies required in the digital age, and the role of HR in organizational success within this context.

In talent competency management, it involves a combination of knowledge, skills, abilities, and performance to enable efficient actions across various general and specific functions. As business structures evolve and global dynamics shift, competency and its management models are becoming increasingly critical. Information and communication technology plays a significant role in this transformation, driving human talent to engage in self-directed learning, identify knowledge gaps, develop dynamic abilities, and acquire new skills to enhance employability. The future workplace is expected to see increased demand for both technical and generic skills, with a focus on sustainability. This trend reflects the emerging knowledge era, where adaptability and continuous learning are essential for success in a rapidly changing business environment (Chia & Gibson, 2023).

In the digital era, the role of HR becomes even more crucial due to the digital transformation affecting work and interaction within organizations. To build outstanding business organizations in the digital age, companies need to take strategic steps that optimize HR potential and respond to rapid changes in the business environment. However, optimizing HR potential comes with its own set of challenges [2]. To address these challenges, a sustainable approach to HR (Sustainable HRM) has emerged.

Adopting new (digital) technologies can significantly contribute to a company's short-term and long-term competitive advantage. However, literature on the impact of digitization on competency and managerial development remains limited. This article aims to bridge this gap by first reviewing critical gaps in the literature concerning competency

and managerial development. We then discuss the concepts of digital literacy and adaptability in the context of management. Attention is given to how managers acquire digital literacy and adaptability and how these enhance their managerial competencies [3].

LITERATURE REVIEW

The Role of Communication, Collaboration, Creativity, and Innovation in HR Competencies in the Era of Industry 4.0

Human Resource (HR) competencies, according to Johannessen [4], are categorized into four main types required to maintain relevance in skills and expertise amid economic innovations. Emerging jobs will demand specific competencies to address these economic innovations. The general competencies needed to adapt to new job roles include activities related to communication, collaboration, creativity, and change (3C1P). These competencies are executed through communication, creativity, collaboration, and adaptability. Additionally, specific competencies related to Science, Technology, Engineering, and Mathematics (STEM) are required for cross-sector fields in science, technology, engineering, and mathematics. HR competencies must also encompass social, emotional, leadership, and cultural knowledge (SELC), reflecting expertise in social, emotional, leadership, and cultural domains. Furthermore, HR development needs to focus on REVE competencies—reflection, ethics, values, and environment—essential for fulfilling other competencies by reflecting achievements, adhering to ethical standards, understanding values, and maintaining a conducive environment.

Changes in HR competency design impact economic innovation, leading to shifts in workforce composition from workers with stable competencies to those with innovative economic competencies. This transition occurs when an employee leaves their role, requiring a replacement with similar competencies. However, the rapid pace of industry change in the early stages of the Fourth Industrial Revolution accelerates the need for evolving competencies. Companies and employees are thus pressured to create work environments aligned with required HR competencies, rather than waiting for others to design such frameworks. The Fourth Industrial Revolution, marked by the advent of new technologies, artificial intelligence, and smart robots, necessitates adaptation to new competencies. Communication, collaboration, creativity, and innovation will become crucial competencies. Consequently, it is vital for both workers and company leaders to manage business activities and all related functions through cross-functional teams. This approach ensures that diverse knowledge domains within business units can meet company needs more effectively, fostering communication, collaboration, creativity, and innovation. Preparing for future changes in competencies and skills requires forming functional teams within the organization to guarantee knowledge sharing and evaluation. Leaders and workers alike must possess the competencies needed to adapt to ongoing changes, making social and psychological competencies crucial for organizational transformation [4].

Competency Knowledge in Industry 4.0 for Meeting Customer Needs

In the context of evolving knowledge, Maliszewska [5] emphasizes that advancements in Industry 4.0 technology have permeated all areas of companies. Managers must possess knowledge competencies to recognize technological progress, including data management, information mastery, and effective collaboration between organizational human resources and machines. This collaboration is structured within a competency model that aligns human-machine tasks and responsibilities with customer needs in the Industry 4.0 framework.

Strategic Management in Competency Design for Operational Success

According to Olsen [6], maintaining competency fulfillment for strategic plans involves several tips. First, to keep strategic plans on track, directly manage competency fulfillment in daily operations. While initially challenging, integrating strategic management into daily operations will make competency design more natural and integral to HR development. Second, make organizational competency design inclusive of all company employees, from staff to management. Everyone's involvement ensures that competency design is not only informational but also actionable. Third, remove minor errors from strategic competency plans to avoid clutter and focus on essentials. Ensure that the complexity of the competency design aligns with its implementation capabilities.

Strategic plans should act as guides rather than business plans, outlining how to transition from current to desired conditions. Each aspect of competency design should clearly define these changes. Strategic plans are not sales tools but action guides for achieving desired conditions. Competency design should be aligned with business strategy, with a team of three to five key staff members leading the process. These leaders are responsible for tracking progress, updating goals, coordinating strategy reviews, and maintaining relevance throughout the year.

To keep strategic plans actionable, summarize them on a single page for easy reference or archive them in a large filing cabinet. This document should serve as a backup and be accessible via internal websites or social media. Recognizing achievements and providing incentives, whether monetary or creative, reinforces the importance of strategic plans and motivates continued success. Regularly review progress and ensure that staff understand and engage with the strategic plan, addressing any issues as they arise. Use scorecards to track progress and maintain accountability, keeping plans simple and aligned with actual implementation.

Leadership by example ensures that strategies are effectively communicated and executed. Celebrating successes, regardless of scale, maintains motivation and reinforces the importance of achieving set goals. Communicate with all staff about progress and address budgetary concerns as needed, fostering a culture of continuous improvement and alignment with strategic objectives.

Competency L9 and Its Role in Organizational Culture and Strategic Plans

Petersen ([7]) discusses the integration of organizational culture with strategic plans, focusing on competencies considered above average. Competency L9, for example, represents a high level of expertise and leadership within organizational culture. This competency is often highlighted as a key factor in achieving strategic goals and contributing to organizational success. It emphasizes the importance of aligning competencies with strategic objectives and ensuring that high-level competencies drive organizational progress.

Modeling Competencies for Managing Organizational Change

Ten Have et al. [8] argue for the use of visualization or new modeling techniques to explain competency concepts. These models aim to assist in managing change by addressing key questions about what needs to change and how to enhance competencies for such changes. Visualizations can represent factors influencing change and the capacity for competency enhancement, aiding in the effective management of organizational transformation.

Critical Reflection and Intercultural Competence

Arasaratnam-Smith & Deardoff [9] highlight the importance of critical reflection in developing intercultural competencies. Based on transformative learning theory, this approach involves understanding and adapting to cultural dilemmas through critical reflection. This process includes evaluating learning experiences and redefining competencies to better navigate intercultural interactions. Reframing personal narratives and reflecting on both the substance and process of intercultural learning are essential for developing effective intercultural competencies.

Mental Health as a Work Competency Indicator

However, according to Houtman et al. [10] there is currently no meaningful evidence from a variety of comparative indicators assessing the association between employment and mental health, this includes job-related stress. These indicators were undertaken in the Netherlands and Belgium, or even throughout Europe. The European Working Conditions Survey (EWCS) includes one survey variable for measuring job competency. In its sixth follow-up survey, mental health was considered a risk through scales of work-related fatigue (EWCS, 2017; items related to mental health measurement, such as feeling exhausted by the end of the workday). This is a part of the EWCS, which is a survey that measures job competency. Although this variable only corresponds to one of the three dimensions of burnout assessment that are well known, the purpose of this study is to demonstrate that these factors represent good practices as part of the process of forecasting burnout among workers in Europe, in conjunction with other concepts that are pertinent. Consequently, the prevalence of exhaustion at the end of the workday, as measured by EWCS-2015 and some methodological measurements of EWCS and fatigue items, is placed in its own discussion with this mental health measurement. This is because the EWCS-2015 and some methodological measurements of fatigue items are used to measure fatigue. Burnout is a state that workers experience at the end of the workday when they become cynical about the results of their work and doubt that the completed work represents their best ability to achieve the desired outcomes. The definition of burnout that is most commonly used comes from Maslach, Jackson, and Leiter. They describe job exhaustion as a state that workers experience. Specifically, in the context of mental health as a major component of burnout, this exhaustion refers to extreme and continuing fatigue in forthcoming professional tasks, together with feelings of emotional tiredness and exhaustion for the working individual. The second aspect of mental health burnout is cynicism, which manifests itself at the conclusion of the workday. This aspect also involves a lack of interest and passion in one's work, as well as uncertainties regarding the value and meaning of finished work achievements. According to the final aspect of burnout, an individual's mental health at the end of the workday is deteriorating, as evidenced by their professional efficacy values. This is accompanied by feelings of incompetence regarding their work and a decreased ability to work effectively, as well as a decrease in the amount of personal achievement that they experience in the workplace. A stress reaction (mental tiredness), poor mental health responses (cynicism), and negative self-confidence (reduced professional efficacy) are the three factors that contribute to the development of a multidimensional construct known as burnout in the field of mental health.

Competence for eBusiness Success

Aweya [11] notes that advancements in electronic and optical technologies, as well as the emergence of eBusiness, social networks, and broadband cellular communication, among other things, have significantly altered the modern networking landscape, which has necessitated adjustments to one's competency. This is in reference to changes in individual understanding. The way in which business is performed has been fundamentally altered by a number of factors, including the availability of cellular networks, high-speed transit networks, and electronic business opportunities. Internet-based business solutions are gradually replacing traditional business systems and procedures in the realm of e-business. These solutions make use of the entire power of enterprises and service providers, in addition to the public Internet, which enables organizations to speed up the process of accomplishing their business objectives. As the field of e-business continues to develop, businesses continually assess the potential influence it

could have on their competitive positions and provide appropriate responses. In the current highly competitive business market, the majority of firms place a significant amount of importance on the strength of their networks, which serve as the foundation of their implementation of an eBusiness strategy. In today's increasingly competitive business world, companies are becoming increasingly aware that their networks are strategic assets and serve an essential function in these organizations.

It is said by Aweya [11] that the competences necessary in e-business include the capability to construct packet sales networks that originate from hosts or routers and are then forwarded through interconnected router systems until the packet reaches a router that is connected to the same network as the target host. Afterwards, the final router will transmit the packet to the host that has been selected within its own local network. Each router has a record of information known as the next-hop, which enables it to transmit data packets through the network until they reach their ultimate destination. The routing table of a router that does not have a direct link to the final destination of the packet is checked, and the router then sends the packet to another router (also known as a next-hop router) that is relatively closer to the destination. This procedure is carried out several times at each router, also known as a hop, until the packet arrives at its ultimate destination within the electronic system.

Knowledge Competence for Business Performance and Productivity

In the context of competency certification frameworks, Belai et al. [12] highlight the significance of knowledge competence that is suitable for the present business environment. This perspective, which is known as a knowledge competence perspective, is utilized in both the business world and the academic world. Knowledge competency is a component of the academic job that scholars do, and scholars define it academically. According to the definitions of other academics, "knowledge competence" refers to the belief that employees in a firm have in order to improve the organizational performance of their company. It is argued by Uriarte in 2008 that knowledge competence has the capacity to develop into more advanced knowledge competence through greater information mastery. This mastery may include experiences, evolving knowledge, and other additions to one's skill. The term "knowledge" is defined by Bell in 1973 as the possession of ideas or concepts that are arranged to portray facts in accordance with a certain logic or through systematic experimental trials. According to Davenport and Prusak in 1998, having knowledge is defined as having knowledge competency that is derived from a combination of experience, values, contextual information, and expertise awareness. While this is going on, Drucker in 1993s asserts that having knowledge is having information on how to turn something into higher competence (for example, individual or organizational competence) through actions, thereby making it more competent or effective in reaching productivity. This type of knowledge is referred to as "particular knowledge competency," and it focuses on the quality level of knowledge, such as how it may be applied in the business activities of an organization or a corporation. The reason that scholars such as Nonaka and Drucker believe that the knowledge competence possessed by an individual or organization is closely related to the processes and activities that are systematically carried out to enhance worker productivity and the knowledge creation function itself is understood when it is considered in the context of knowledge competence. Consequently, the concept of "knowledge competency" is extremely dependent on the existence of its environment.

Stress Management in Competency Development and Success

In his article "Recognition of Success Related to Competency," Kaluza [13] discusses the relationship between practicing one's competencies and the personal component of stressful situations in the process of obtaining success. It is common for people to find it challenging to use their competencies because they associate doing so with feelings of personal guilt. This can result in sentiments of incompetence and failure, or even self-blame. On the other hand, such acknowledgment creates a misconception. It is not about making mistakes or failing as an individual; rather, it is about feelings of stress. It is possible to reduce the powerlessness of competent execution by first understanding the stress component that exists within oneself and then liberating oneself from the unilateral dependence on stressful circumstances that occur outside of oneself. By tackling personal stress, rather than simply responding to it, one can change their attitudes and behaviors, which in turn opens up opportunities for finding solutions, making decisions, and taking measures to maintain their physical and mental health despite the pressures that come from the outside. Therefore, in order to regain competency, individuals should encourage themselves to detect stress and liberate themselves from demands. This serves as a straightforward remedy and a quick recommendation that assists in the management of stress in the current circumstances. There are three components that make up stress: stress triggers, stress reactions, and stress reinforcers. Stress is a very individual experience that plays a role in the development of competences.

Autonomy and Competence of University Management Teams in Distance Education during the Pandemic

Regarding the factors that influence competence, Tryma [14] notes that at the beginning of the COVID-19 pandemic, the Ministry of Education and Science did not provide detailed regulations for university activities. However, they did emphasize the significance of proactive collective action from universities in order to deal with specific pandemic conditions. For the purpose of ensuring the establishment and execution of regulatory frameworks to handle the pandemic as well as extensive communication both vertically and horizontally, the Ministry of Education and Science in a number of nations depended on the autonomy and competency of university management teams. Not only did

they have to handle distant education, but they also had to make sure that dormitories, student activities, student volunteer organizations, and the psychological support that students and teachers required were all protected.

The management of the campus during the COVID-19 pandemic resulted in significant changes to the educational and scientific activities that were carried out in order to comply with the emergency measures. There are a variety of social functions that are involved in the management of the epidemic with standards at higher education institutions. These institutions' goals include the creation and dissemination of knowledge as well as the preparation of young people for future employment. In addition to their teaching tasks, contemporary colleges also provide functions that are indirectly related to the students' capacity to maintain a positive career trajectory. Universities are social actors, and the activities they engage in are geared toward assuring the growth of social life among their students. Higher education institutions contribute to the formation of a "society with the requisite knowledge" in order to meet the expectations of the community from the perspective of higher education. This is accomplished through the academic diffusion of knowledge and the development of practical university programs. Due to the fact that higher education has become an essential component of the public sector, universities are being forced to quickly adjust to new forms with organizational performance being influenced by the COVID-19 pandemic. This is because universities have historically been confronted with new social and cultural missions since the pandemic began.

The Role of Thesis Supervisors in Building Research Competence and Data Support for Master's Students

When it comes to education, Zanoni et al. [15] state that doctoral students collectively concentrate their research on diversity while simultaneously taking into consideration theses from undergraduate or master's programs on topics that are related to diversity and are close to their research. This complements their research competence. Through the act of taking on the job of thesis supervisor, they are able to reap the benefits of providing assistance to other master's students in the process of constructing arguments and writing research, while simultaneously involving these master's students in the process of collecting more data that is required for the completion of their research. The role of a master's program supervisor, on the other hand, is not a simple one to take on since it demands an awareness of how to properly provide support to master's students as part of a particular blend of competence, incentive, and expectations. For ethical reasons, it is necessary to strike a balance between having high expectations in terms of satisfying research data and having expectations that will lead to high-quality research outcomes, and having realistic expectations based on correct assessments of their capabilities. This is because having unreasonable expectations might lead to a decrease in motivation. In addition, it is essential to take into account the ethical responsibilities that master's degree students have when it comes to doing their own research in connection with the completion of their theses.

Social and Personal Competence

Del Prette and Del Prette [16] stress the fact that social competence in activities conducted does not need to be extraordinary; rather, it should achieve the required output according to competence requirements, both personally and socially. This is being done in the context of translating mathematical models. There are numerous interpersonal tasks in which not all personal or social competence requirements are regularly met as necessary. Because of this, the actions that are made can be reviewed to determine whether or not they are sufficient to attain the requisite level of competence.

RESEARCH METHODOLOGY

This study makes use of NVivo version 14 for the purpose of doing qualitative data analysis. NVivo is a software application that was developed specifically for qualitative data analysis. It gives users the ability to carry out actions that produce results that are predictable. On the other hand, qualitative analysis lends itself to a more fluid and open-ended approach. As a result, the Five-Level QDA® methodology places an emphasis on the significance of distinguishing between analytical strategies, which include objectives and analysis plans, and software tactics, which refer to the technical methods of utilizing NVivo to accomplish these objectives.

By gaining a grasp of and effectively controlling this technique, NVivo gives users the ability to generate results that are predictable, which is reflective of the organized nature of the software. Additionally, NVivo is capable of supporting a qualitative analysis that is both more open and dynamic. This makes it easier to differentiate between analytical strategies, which include aims and plans for analysis, and the software, which consists of technical ways for accomplishing these objectives. In the area of qualitative research, this dual capability guarantees that NVivo will continue to be efficient and successful.

DISCUSSION

This study explores the factors necessary for human resource (HR) competency in Indonesia, examining the discrepancies between expectations and reality. Fifteen factors theoretically describe the required competencies. By using NVivo as an analytical tool, the researcher effectively manages and interprets qualitative data related to these factors. The Five-Level QDA® methodology aids in distinguishing analytical strategies—i.e., identifying and understanding these competency factors—from the software tactics used for data analysis.

While the study is limited to 15 competency factors, the use of NVivo and appropriate methodological approaches enhance the understanding of the quality of HR in Indonesia more comprehensively [17]. The results of the competency gap exploration are illustrated in Diagram 1: Competency Gaps in Indonesian HR.

Diagram 1

Diagram 1: Competency Gaps in Indonesian HR.

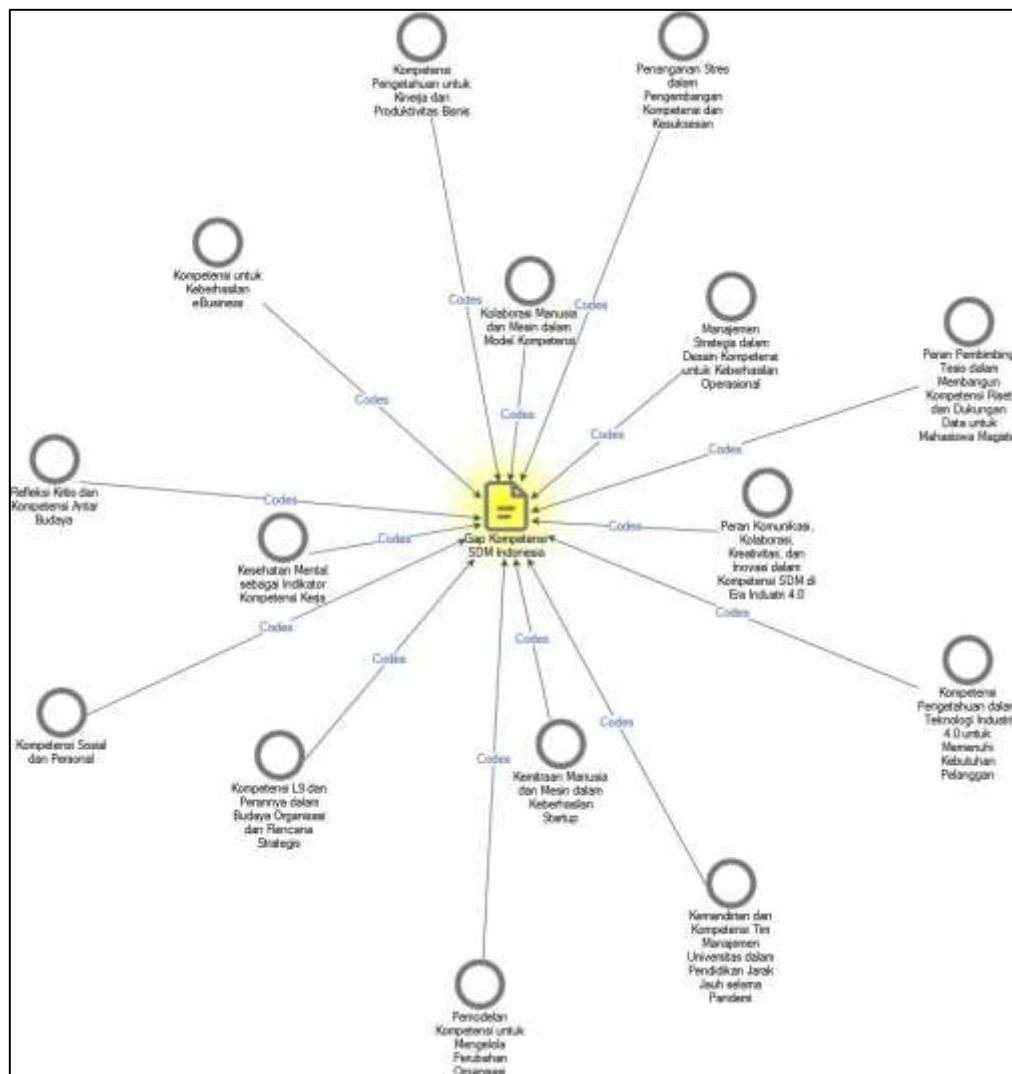


Diagram 1 provides a summary of the 15 main factors contributing to the human resource (HR) competency gap in Indonesia, detailed as follows:

1. **Knowledge Competency for Business Performance and Productivity:** Emphasizes the importance of relevant knowledge to enhance performance and productivity in the business environment.
2. **Stress Management in Competency Development and Success:** Highlights the importance of managing stress to develop competencies and achieve career success.
3. **Role of Thesis Supervisors in Building Research Competency and Data Support for Master's Students:** Focuses on the critical role of academic supervisors in assisting master's students with research and data analysis skills.

4. **Role of Communication, Collaboration, Creativity, and Innovation in HR Development in the Era of Industry 4.0:** Identifies communication, collaboration, creativity, and innovation as key competencies for HR development in the context of Industry 4.0.
 5. **Knowledge Competency in Industry 4.0 Technologies to Meet Customer Needs:** Emphasizes the necessity of understanding Industry 4.0 technologies to meet modern customer demands.
 6. **Independence and Competency of University Management Teams in Remote Education During the Pandemic:** Focuses on the ability of university management teams to effectively implement remote education during the pandemic.
 7. **Competency Models for Managing Change:** Highlights the need for competencies in managing dynamic organizational and workplace changes.
 8. **Human-Machine Partnership in Startup Success:** Emphasizes collaboration between humans and technology for successful business startups.
 9. **Level 9 Competencies and Their Role in Organizational Culture and Strategic Planning:** Describes the importance of level 9 competencies in fostering organizational culture and strategic planning.
 10. **Mental Health as an Indicator of Work Competency:** Stresses the significance of mental health as a key indicator of work competency and productivity.
 11. **Critical Reflection and Cross-Cultural Competence:** Highlights the need for critical reflection and cross-cultural competencies in an increasingly global work environment.
 12. **Social and Personal Competencies:** Emphasizes social and personal skills as foundational elements for professional competency development.
 13. **Competency for eBusiness Success:** Identifies the skills required to succeed in electronic business (eBusiness).
 14. **Human-Machine Collaboration in Competency Models:** Demonstrates the importance of skills in working with technology to enhance existing competency models.
 15. **Strategic Management in Competency Design for Operational Success:** Emphasizes the role of strategic management in designing competencies that support organizational operational success.
- Overall, this diagram illustrates various aspects of the HR competency gap in Indonesia, covering technical, managerial, mental, and social dimensions [17]. Further insights into the achievements and realities of HR competencies in Indonesia can be reviewed in **Table 1**.

Table 1 Percentage Gap of HR Competencies in Indonesia

Factors Affecting HR Competency Gaps	Percentage coverage
Independence and Competence of University Management Teams in Distance Education During the Pandemic	0.85%
Independence and Competence of University Management Teams in Distance Education During the Pandemic/Role of Thesis Supervisors in Building Research Competence and Providing Data Support for Master's Students	0.44%
Competency L9 and Its Role in Organizational Culture and Strategic Planning	0.27%
Competency L9 and Its Role in Organizational Culture and Strategic Planning/Competency Modeling for Managing Organizational Change	0.50%
Social and Personal Competencies	0.11%
Social and Personal Competencies / Human-Machine Partnership in Startup Success	0.69%
Social and Personal Competencies / Human-Machine Collaboration in Competency Models	0.50%
Competencies for eBusiness Success	0.18%

Competencies for eBusiness Success / Knowledge Competencies for Business Performance and Productivity	0.47%
Competencies for eBusiness Success / Stress Management in Competency Development and Success	0.57%
The Role of Communication, Collaboration, Creativity, and Innovation in Human Resource Competencies in the Era of Industry 4.0	0.88%
The Role of Communication, Collaboration, Creativity, and Innovation in Human Resource Competencies in the Era of Industry 4.0 / Knowledge Competencies in Industry 4.0 Technologies to Meet Customer Needs	0.35%
The Role of Communication, Collaboration, Creativity, and Innovation in Human Resource Competencies in the Era of Industry 4.0 / Strategic Management in Competency Design for Operational Success	0.25%
Critical Reflection and Intercultural Competencies	0.41%
Critical Reflection and Intercultural Competencies / Mental Health as an Indicator of Work Competency	0.47%

The analysis of the competency gaps in Indonesian human resources reveals several key factors influencing HR competencies [18], each with its specific impact as detailed below:

1. **Autonomy and Competency of University Management Teams in Distance Education During the Pandemic**

- **Percentage: 0.85%**
- **Analysis:** The high percentage indicates that the autonomy and competency of university management teams in handling distance education during the pandemic have a significant impact on HR competencies. This suggests that effective distance education strategies can considerably enhance HR competencies. In this context, the autonomy and competency of university management teams are crucial for improving HR competencies. These strategies not only support students but also enhance the university's management abilities to handle emergencies like pandemics.

2. **Role of Thesis Advisors in Building Research Competency and Data Support for Master's Students**

- **Percentage: 0.44%**
- **Analysis:** A lower percentage indicates that the role of thesis advisors in building research competency and data support for master's students has a more limited impact. Nevertheless, thesis advisors play a significant role in enhancing research and data analysis competencies. They act as guides and mentors, helping students develop better research and data analysis skills. However, this role is not as impactful as effective distance education strategies.

3. **Competency L9 and Its Role in Organizational Culture and Strategic Planning**

- **Percentage: 0.27%**
- **Analysis:** The low percentage suggests that Competency L9, related to strategic management and organizational culture, has a limited impact. This may be due to insufficient focus on this competency within company strategies. Competency L9 is crucial for improving company performance and productivity. However, if this strategy is not effectively implemented, its impact will be limited.

4. **Social and Personal Competencies**

- **Percentage: 0.11%**
- **Analysis:** The very low percentage shows that social and personal competencies have a minimal impact. This might be due to insufficient attention to social and personal aspects within company competency strategies. Social and personal competencies, such as interaction skills, teamwork, and environmental adaptation, are vital for improving performance and job satisfaction. However, if these strategies are not effectively applied, their impact will be limited.

5. **Role of Communication, Collaboration, Creativity, and Innovation in HR Competencies in the Era of Industry 4.0**

- **Percentage: 0.88%**
- **Analysis:** The very high percentage highlights that communication, collaboration, creativity, and innovation play a significant role in HR competencies in the Industry 4.0 era. This indicates that these abilities are crucial for enhancing HR competencies. In the Industry 4.0 era, companies must innovate and collaborate to remain relevant and

competitive. This strategy not only boosts performance but also helps companies navigate technological and market changes.

6. Critical Reflection and Intercultural Competencies

- **Percentage: 0.41%**
- **Analysis:** A lower percentage indicates that critical reflection and intercultural competencies have a more limited impact. However, these competencies are still important for improving cultural adaptation and integration within organizations. Critical reflection and intercultural competencies help companies address social and cultural changes. This strategy enhances adaptation and cultural integration, which are essential in the era of globalization.

7. Mental Health as an Indicator of Work Competency

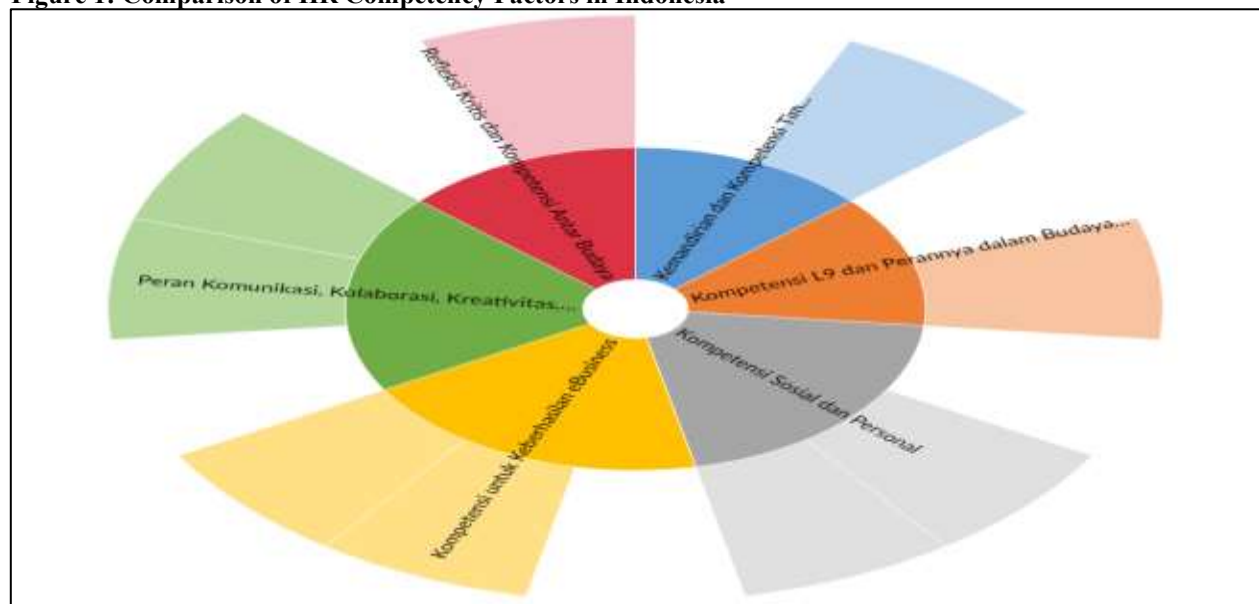
- **Percentage: 0.47%**
- **Analysis:** The lower percentage suggests that mental health as an indicator of work competency has a more limited impact. Nonetheless, this role is still important for improving work performance and productivity. Mental health significantly affects performance and job satisfaction. This strategy helps improve mental health and reduce work-related stress, which can negatively impact performance.

With the NVivo analysis, Figure 1 is presented to illustrate the hierarchy of factors measured using Pearson correlation coefficients. This analysis, processed into a comparative format, allows us to examine the factors influencing HR competencies in Indonesia.

The figure visually represents the comparative analysis of various factors impacting HR competencies. It highlights the relative importance of each factor based on Pearson correlation coefficients. The hierarchy displayed in Figure 1 reflects how different elements contribute to the overall HR competency landscape in Indonesia.

The factors depicted in the figure are arranged according to their influence, providing a clear view of how each factor compares with others in terms of impact [18]. This comparative approach helps in understanding which factors are most significant and how they interact to shape HR competencies in the region.

Figure 1: Comparison of HR Competency Factors in Indonesia



Autonomy and Competency of University Management Teams in Distance Education During the Pandemic vs. Role of Thesis Advisors in Building Research Competency and Data Support for Master's Students

The analysis reveals a significant positive correlation of 0.355714 between the autonomy and competency of university management teams in distance education during the pandemic and the role of thesis advisors in building research competency and providing data support for master's students. This strong correlation suggests that effective distance education strategies, supported by capable management teams, significantly enhance the role of thesis advisors. In essence, the ability of university management to operate independently and competently in a remote education context positively impacts how thesis advisors contribute to students' research skills and data analysis capabilities.

Critical Reflection and Intercultural Competencies vs. Role of Communication, Collaboration, Creativity, and Innovation in HR Competencies in the Era of Industry 4.0

A positive correlation of 0.321078 is observed between critical reflection and intercultural competencies and the role of communication, collaboration, creativity, and innovation in HR competencies in the Industry 4.0 era. This indicates that having strong critical reflection and intercultural skills positively influences the effectiveness of communication

and collaboration within diverse teams. These competencies are crucial for enhancing HR practices and fostering an innovative and collaborative environment in the rapidly evolving Industry 4.0 landscape.

Role of Communication, Collaboration, Creativity, and Innovation in HR Competencies in the Era of Industry 4.0 vs. Competency L9 and Its Role in Organizational Culture and Strategic Planning

The analysis shows a significant positive correlation of 0.316635 between the role of communication, collaboration, creativity, and innovation in HR competencies and Competency L9's influence on organizational culture and strategic planning. This correlation highlights the importance of these dynamic skills in shaping organizational culture and strategic planning. Effective communication, collaboration, and creativity are integral to developing a robust organizational culture and executing strategic plans successfully.

Competencies for eBusiness vs. Stress Management in Competency Development and Success

A correlation of 0.299265 underscores the positive relationship between competencies for eBusiness and stress management in competency development and success. This finding emphasizes that managing stress is a critical factor in achieving success in eBusiness. The ability to handle stress effectively is crucial for maintaining high performance and productivity in the competitive and demanding digital business environment.

Competency L9 and Its Role in Organizational Culture and Strategic Planning vs. Modeling Competencies for Managing Organizational Change

The correlation of 0.294171 indicates a positive relationship between Competency L9's role in organizational culture and strategic planning and the modeling of competencies required for managing organizational change. This suggests that competencies related to management and organizational culture are vital for effectively modeling and managing organizational change. The skills associated with Competency L9 are essential for leading and navigating change within an organization.

Autonomy and Competency of University Management Teams in Distance Education During the Pandemic vs. Competencies for eBusiness Success

With a correlation of 0.278651, there is a positive link between the autonomy and competency of university management teams in distance education and competencies needed for eBusiness success. This relationship highlights the importance of managerial skills and autonomy in achieving success in digital business ventures. Effective management practices and independent operation are crucial for fostering the skills required for thriving in the eBusiness sector.

Competencies for eBusiness vs. Knowledge Competencies for Business Performance and Productivity

A positive correlation of 0.273293 is found between competencies for eBusiness and knowledge competencies related to business performance and productivity. This indicates that having strong knowledge competencies in eBusiness is important for improving business performance and productivity. Proficiency in digital business management is essential for achieving productive and successful outcomes.

Critical Reflection and Intercultural Competencies vs. Autonomy and Competency of University Management Teams in Distance Education During the Pandemic

The correlation of 0.227004 shows a positive relationship between critical reflection and intercultural competencies and the autonomy and competency of university management teams in distance education. This suggests that the ability to critically reflect and understand intercultural dynamics enhances the effectiveness of management teams in a remote education setting. These skills contribute to better management practices and improved competency in distance education contexts.

CONCLUSION

This study reveals a complex interplay among various competencies crucial in the contexts of management, education, and business, particularly in the digital and globalized era. Firstly, a positive correlation is found between the autonomy and competency of university management teams in distance education and the role of thesis advisors, contributing to the enhancement of research competency among master's students. This underscores the importance of effective management in remote education settings.

Additionally, critical reflection and intercultural competencies are shown to be vital in HR development. These skills are instrumental in improving communication, collaboration, creativity, and innovation within the Industry 4.0 framework. Competencies in these areas support the development of effective organizational cultures and strategic planning, including those related to Competency L9.

Moreover, the ability to handle stress is positively correlated with success in eBusiness, highlighting stress management as a crucial component of digital business skills development. Knowledge competencies associated with digital business play a significant role in enhancing business performance and productivity.

Finally, critical reflection and intercultural understanding are also essential for the autonomy and competency of management teams in distance education. This indicates that effective management in remote education requires these

competencies. The findings emphasize the importance of a range of competencies in addressing the challenges of the digital and globalized era.

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