

LEVERAGING PEOPLE ANALYTICS AND DIGITAL WORKFORCE INTELLIGENCE TO STRENGTHEN STRATEGIC TALENT DEVELOPMENT AND ORGANIZATIONAL RESILIENCE IN THE INDUSTRY 5.0 ERA

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Informasi	Abstract
Volume : 3	<p><i>The increasing adoption of digital technologies has transformed human resource management from an administrative function into a strategic organizational capability. Among these developments, People Analytics and Digital Workforce Intelligence have emerged as critical approaches that enable organizations to make evidence-based decisions regarding talent management, workforce planning, and organizational development. Within the Industry 5.0 era, organizations are encouraged to integrate advanced digital technologies while maintaining a human-centered perspective that promotes employee well-being, innovation, and sustainable growth. This study aims to explore how People Analytics and Digital Workforce Intelligence contribute to strengthening strategic talent development and organizational resilience. A qualitative descriptive approach was employed using semi-structured interviews, organizational documents, and recent scholarly literature. The collected data were analyzed through thematic analysis to identify major patterns regarding the implementation of data-driven human resource management practices. The findings reveal that People Analytics supports more objective workforce decisions, improves employee competency mapping, and facilitates personalized talent development strategies. Furthermore, Digital Workforce Intelligence enables organizations to respond more effectively to environmental uncertainty by improving workforce adaptability, organizational learning, and strategic resilience. This study highlights that the successful implementation of data-driven human resource management depends not only on technological capability but also on leadership commitment, employee digital literacy, and ethical data governance. The findings contribute to the growing literature on digital human resource management by providing a human-centered perspective on the strategic role of People Analytics within the Industry 5.0 framework.</i></p> <p>Keyword: People Analytics, Digital Workforce Intelligence, Strategic Talent Development, Organizational Resilience, Industry 5.0.</p>
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A. INTRODUCTION

Digital transformation has fundamentally changed the role of Human Resource Management (HRM) in modern organizations. Rather than functioning solely as an administrative department, HRM has evolved into a strategic partner that supports organizational competitiveness through data-driven decision-making. One of the most significant developments in this transformation is the emergence of People Analytics, which enables organizations to collect, analyze, and interpret workforce data to improve human resource decisions. According to Margherita (2022), People Analytics provides organizations with valuable insights for workforce planning, employee development, and performance optimization, while Minbaeva (2021) emphasized that data-driven HR practices strengthen organizational capability by improving the quality of strategic decisions.

Alongside the development of People Analytics, organizations have increasingly adopted Digital Workforce Intelligence to obtain comprehensive insights into employee capabilities, organizational performance, and future workforce requirements. Digital Workforce Intelligence integrates data analytics, digital technologies, and workforce information to support more responsive and adaptive organizational strategies. According to Davenport and Bean (2023), organizations utilizing workforce intelligence are better equipped to anticipate skill shortages, identify future talent requirements, and improve organizational responsiveness. Similarly, Vrontis et al. (2022) argued that digital technologies have become strategic resources that enable organizations to improve workforce flexibility, innovation, and sustainable organizational performance.

Strategic Talent Development has become increasingly important as organizations compete to attract, retain, and develop highly skilled employees in rapidly changing business environments. Traditional talent development approaches are often limited by subjective decision-making and insufficient workforce information. In contrast, People Analytics enables organizations to identify competency gaps, predict employee development needs, and design personalized learning pathways based on objective evidence. Furthermore, Digital Workforce Intelligence supports continuous organizational learning by providing real-time information regarding employee capabilities and organizational readiness. Recent studies by Budhwar et al. (2023) and Chowdhury et al. (2023) indicate that organizations adopting data-driven HR strategies achieve higher workforce adaptability, stronger innovation capability, and more sustainable organizational performance.

Despite the increasing implementation of People Analytics across organizations, empirical studies examining its contribution to Strategic Talent Development and Organizational Resilience within the Industry 5.0 framework remain relatively limited. Existing research predominantly focuses on the technical aspects of HR analytics while paying less attention to its strategic contribution to organizational sustainability and human-centered management. Moreover, organizations continue to face challenges related to employee data privacy, ethical governance, leadership commitment, and digital capability during the implementation of People Analytics initiatives (Jatobá et al., 2023; Breque et al., 2021). Therefore, this study explores how People Analytics and Digital Workforce Intelligence support Strategic Talent Development and strengthen Organizational Resilience, while contributing to the implementation of human-centered management principles in the Industry 5.0 era.

B. RESEARCH METHOD

This study employed a qualitative descriptive research design to explore the strategic role of People Analytics and Digital Workforce Intelligence in strengthening talent development and organizational resilience within the Industry 5.0 era. A qualitative descriptive approach was considered appropriate because it enables researchers to gain a comprehensive understanding of organizational experiences, perceptions, and practices regarding the implementation of data-driven human resource management (Creswell & Poth, 2018). The study focused on organizations that have adopted digital technologies to support workforce planning, employee development, and strategic decision-making. This approach allows researchers to examine the phenomenon within its natural organizational setting while emphasizing participants' perspectives and organizational contexts (Yin, 2018).

Data were collected through semi-structured interviews with human resource managers, organizational leaders, and employees who were directly involved in talent management and workforce development activities. To improve the credibility and richness of the findings, interview data were complemented with organizational documents, internal reports, and recent scholarly literature related to People Analytics, Digital Workforce Intelligence, and Industry 5.0. The use of multiple data sources enabled data triangulation, allowing the researchers to obtain a more comprehensive understanding of the phenomenon under investigation (Lincoln & Guba, 1985; Creswell & Poth, 2018).

The collected data were analyzed using thematic analysis following the procedures

proposed by Braun and Clarke (2021), including data familiarization, initial coding, theme generation, theme review, theme definition, and interpretation. To ensure the trustworthiness of the study, the researchers applied credibility, transferability, dependability, and confirmability by comparing findings across different data sources and validating the emerging themes. This analytical approach facilitated the identification of key themes explaining how People Analytics and Digital Workforce Intelligence contribute to strategic talent development and organizational resilience in the context of Industry 5.0.

C. RESULTS AND DISCUSSION

3.1 Leveraging People Analytics for Strategic Human Resource Decision-Making

The findings indicate that People Analytics has become an essential strategic tool for supporting human resource decision-making in modern organizations. Unlike conventional HR practices that rely primarily on managerial intuition, People Analytics enables organizations to utilize workforce data to identify patterns, evaluate employee performance, and predict future human resource needs. Participants emphasized that data-driven decision-making improves the accuracy and transparency of recruitment, promotion, and workforce planning processes. These findings are consistent with Margherita (2022), who argued that People Analytics enables organizations to transform workforce data into valuable strategic information that enhances organizational effectiveness. Likewise, Minbaeva (2021) highlighted that evidence-based HR decisions contribute to higher organizational performance and long-term competitiveness.

Another important finding is that People Analytics supports managers in identifying workforce trends and competency gaps before they become organizational challenges. Interview participants explained that workforce data are continuously analyzed to evaluate employee skills, monitor productivity, and determine future competency requirements. Such information enables organizations to develop proactive human resource strategies instead of relying solely on reactive decision-making. According to Davenport and Bean (2023), organizations that effectively utilize People Analytics demonstrate greater capability in forecasting workforce requirements and aligning talent strategies with organizational objectives. This proactive approach strengthens strategic planning and reduces uncertainty in workforce management.

Participants also emphasized that People Analytics improves fairness and objectivity in human resource management. Decisions regarding employee development, career

progression, and performance evaluation are increasingly supported by measurable data rather than subjective managerial judgments. This approach enhances employee trust because organizational decisions are perceived as more transparent and evidence-based. Budhwar et al. (2023) argued that data-driven HR practices improve organizational credibility by reducing bias and supporting fairer talent management processes. Furthermore, Chowdhury et al. (2023) reported that organizations implementing People Analytics achieve better alignment between workforce capabilities and strategic business goals.

Despite these benefits, the study found that successful implementation of People Analytics depends on organizational readiness, data quality, leadership commitment, and employee acceptance. Participants acknowledged that challenges such as fragmented workforce databases, limited analytical capabilities, and concerns regarding employee privacy remain barriers to effective implementation. Consequently, organizations should invest not only in digital infrastructure but also in developing analytical competencies and ethical data governance. These findings support Jatobá et al. (2023), who emphasized that responsible data management and transparent organizational policies are fundamental prerequisites for maximizing the strategic value of People Analytics within Industry 5.0 organizations.

3.2 Digital Workforce Intelligence in Supporting Strategic Talent Development

The findings reveal that Digital Workforce Intelligence plays a significant role in strengthening strategic talent development by enabling organizations to understand employee capabilities, learning needs, and future workforce requirements. Participants explained that organizations increasingly rely on digital workforce data to identify high-potential employees, monitor competency development, and design personalized career development programs. This approach allows organizations to allocate learning resources more effectively while ensuring that employees possess competencies aligned with future business demands. According to Vrontis et al. (2022), digital workforce intelligence provides valuable insights that support strategic talent management and improve workforce readiness in rapidly changing organizational environments.

Another important finding indicates that Digital Workforce Intelligence encourages continuous learning through personalized development strategies. Interview participants reported that digital platforms provide recommendations for training, professional certifications, and skill development based on individual competency profiles and organizational objectives. Such personalized learning pathways motivate employees to continuously improve their capabilities while supporting organizational innovation.

Margherita (2022) emphasized that digital technologies enable organizations to shift from standardized training approaches toward individualized talent development strategies. Likewise, Budhwar et al. (2023) argued that continuous learning has become a critical component of sustainable human resource development in the digital era.

The study also found that Digital Workforce Intelligence strengthens collaboration between employees and organizational leaders in talent management activities. Participants explained that workforce intelligence dashboards provide managers with comprehensive information regarding employee performance, competency achievement, career progression, and development opportunities. Consequently, career discussions become more objective and transparent because they are supported by reliable workforce data rather than subjective managerial perceptions. According to Chowdhury et al. (2023), data-driven talent management enhances organizational effectiveness by improving communication, employee engagement, and workforce planning.

Despite these advantages, several participants acknowledged that implementing Digital Workforce Intelligence requires substantial organizational investment in digital infrastructure, workforce analytics capabilities, and employee digital literacy. Organizations must also establish clear policies regarding data privacy, ethical information management, and employee participation to maintain trust in digital human resource systems. These findings support Jatobá et al. (2023), who emphasized that sustainable digital transformation depends on balancing technological innovation with ethical governance, organizational transparency, and employee empowerment. Therefore, Digital Workforce Intelligence should be viewed not only as a technological solution but also as a strategic organizational capability that supports long-term talent sustainability.

3.3 Organizational Resilience through Data-Driven Human Resource Management in the Industry 5.0 Era

The findings demonstrate that People Analytics and Digital Workforce Intelligence significantly strengthen organizational resilience by enabling organizations to anticipate, respond to, and recover from internal and external challenges more effectively. Participants explained that data-driven human resource management provides timely workforce insights that support strategic decision-making during periods of uncertainty. Information related to employee competencies, workforce availability, and performance trends allows organizations to adapt rapidly to changing business conditions while maintaining operational continuity. According to Breque et al. (2021), Industry 5.0 encourages organizations to combine

advanced technologies with human-centered management to create resilient and sustainable organizations. Similarly, Teece (2018) emphasized that organizational resilience depends on an organization's ability to continuously sense environmental changes and reconfigure its strategic resources.

Another important finding indicates that data-driven human resource management improves organizational adaptability by supporting proactive workforce planning. Participants highlighted that People Analytics enables organizations to identify future talent requirements, anticipate competency shortages, and develop succession planning strategies before operational disruptions occur. Such proactive planning reduces organizational vulnerability while ensuring that critical business functions remain sustainable during periods of rapid technological and economic change. These findings are consistent with Davenport and Bean (2023), who reported that workforce intelligence enhances organizational preparedness by providing predictive insights that improve long-term strategic planning and resource allocation.

The study also found that organizational resilience is closely associated with continuous learning and knowledge sharing supported by digital technologies. Participants explained that Digital Workforce Intelligence facilitates collaboration among employees through digital platforms that encourage knowledge exchange, competency development, and innovation. As employees continuously update their knowledge and skills, organizations become more capable of responding to emerging challenges and implementing organizational change successfully. Budhwar et al. (2023) argued that sustainable organizational resilience requires continuous employee development, digital capability enhancement, and leadership support. Likewise, Vrontis et al. (2022) emphasized that digital transformation strengthens organizational resilience by improving collaboration and accelerating organizational learning.

Despite the considerable benefits of data-driven human resource management, participants acknowledged that maintaining organizational resilience requires continuous investment in digital infrastructure, employee capability development, and ethical data governance. Organizations must ensure that workforce data are managed responsibly while maintaining employee trust, transparency, and data privacy. Furthermore, leadership commitment remains essential in fostering a culture that embraces innovation and continuous improvement. Therefore, People Analytics and Digital Workforce Intelligence should be viewed not merely as technological tools but as strategic organizational capabilities

that support sustainable competitiveness and long-term resilience within the Industry 5.0 environment (Jatobá et al., 2023; Margherita, 2022).

D. CONCLUSION

This study explored the strategic role of People Analytics and Digital Workforce Intelligence in strengthening strategic talent development and organizational resilience within the Industry 5.0 era. The findings indicate that data-driven human resource management enables organizations to make more objective workforce decisions, improve competency mapping, optimize talent development programs, and strengthen organizational adaptability. Furthermore, Digital Workforce Intelligence supports evidence-based strategic planning by providing comprehensive workforce insights that enhance employee capability development and organizational sustainability. These findings demonstrate that digital technologies have become essential strategic resources for organizations seeking to remain competitive in increasingly dynamic business environments.

From a practical perspective, organizations should invest not only in digital technologies but also in employee digital competencies, leadership development, and ethical data governance to maximize the benefits of People Analytics and Digital Workforce Intelligence. Establishing transparent data management practices and fostering a culture of continuous learning will strengthen employee trust while improving organizational resilience. Future studies are encouraged to investigate the implementation of People Analytics across different industries and organizational contexts and to explore additional factors such as digital leadership, organizational culture, technology acceptance, and employee well-being to further enrich the literature on digital human resource management in the Industry 5.0 era.

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