


Digital Transformation In Human Resource Management: Strategy And Implementation

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Article Info	ABSTRACT
<p>Keywords: Digital Transformation, Human Resources Management (HRM), Online Recruitment, Applicant Tracking System (ATS)</p>	<p>Digital transformation in human resource management (HR) has become the main focus for organizations around the world in facing the industrial era 4.0. This research aims to explore the strategy and implementation of digital transformation in HR management, as well as its impact on operational efficiency and employee satisfaction. Using a qualitative approach, data analysis of related literature. The results of this research show that the strategy and implementation of digital transformation in human resource management (HR) has a significant positive impact on the efficiency and effectiveness of various HR processes. The use of technology such as HR information systems (HRIS), e-learning platforms, and data-driven analytical tools speed up administrative processes, increase the accuracy of performance evaluations, and enable more flexible training management. In addition, the application of artificial intelligence (AI) and machine learning in recruitment and performance management increases speed and objectivity in the process. Thus, digital transformation not only improves operational processes but also improves employee experience and satisfaction, contributing to organizational success and competitiveness .. This research concludes that successful digital transformation in HR management requires careful strategic planning, support from top management, and active involvement from all stakeholders.</p>
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INTRODUCTION

Digital transformation has brought fundamental changes to almost all aspects of our lives, overhauling the way we work, communicate and interact. In the world of work, digital technologies such as automation, artificial intelligence and cloud computing have changed various industries by increasing efficiency and productivity (Putri et al, 2021). Jobs that previously required a lot of time and effort can now be completed more quickly and accurately using advanced software and machines. In addition, remote work models supported by video conferencing technology and online collaboration have become the new norm , allowing greater flexibility for employees and companies (Baskoro, 2024).

Apart from the world of work, digital transformation also affects the way we communicate and interact. Social media, instant messaging applications, and content sharing platforms have changed the way we connect with other people, both personally and

professionally (Armaya et al, 2023). Information can be shared quickly and easily, allowing us to stay up-to-date with the latest news and trends. Education and entertainment have also experienced significant changes with the advent of e-learning, online streaming, and digital games, providing wider and more flexible access to a variety of resources and experiences (Jejen, 2021).

Human Resources Management (HR) is a series of processes that aim to manage the workforce in an organization, starting from recruitment, training, development, to performance evaluation (Tahir et al, 2023). In the current digital era, technology plays an important role in the transformation of HR management (Wahyudi et al, 2023). Digitalization in HR management refers to the use of digital technology to increase the efficiency and effectiveness of workforce management processes. For example, HR information systems (HRIS) enable companies to automate many administrative tasks that previously consumed time and resources, such as payroll, leave management, and employee data recording. Thus, HR managers can focus more on strategic tasks that require in-depth analysis and decision making (Hijrasil et al, 2023).

Apart from that, digital technology also supports employee recruitment and development through online platforms and data-based evaluation tools. The recruitment process has become more efficient with job search websites, professional social media, and applicant tracking systems (ATS) that can automatically screen candidates based on certain criteria (Arribe et al., 2024). Employee training and development has also been enhanced with e-learning and interactive training modules that can be accessed anytime and anywhere, enabling more flexible and continuous learning (Tiara et al, 2023). Employee performance evaluation can be done more objectively using analytical software that provides insights based on real performance data. Digital transformation in HR management not only increases productivity and efficiency, but also helps create a work environment that is more responsive and adaptive to change (Helmi et al, 2023).

In the era of digital transformation, organizations must be able to adapt to continuous technological changes, and are required to be able to overcome changes in culture and work habits that arise as a result of the use of technology (Wahyudi et al., 2023). Technological changes not only affect the tools and systems used, but also affect the way employees work and interact. Human resource management (HR) plays a crucial role in ensuring that organizations can adapt to these changes (Basuki, 2023). For this reason, HR managers must continue to develop their skills and knowledge in the fields of information technology, data analysis, and adaptability to face challenges in the era of digital transformation (Hakim, 2023).

Understanding information technology is an important basis for HR managers in managing tools and systems that support daily work. This includes understanding how HR information management systems (HRIS) function, as well as the ability to use software and applications that assist in employee recruitment, training, and development (Lasmaya, 2016). In addition, HR managers must be able to recognize the potential and benefits of new technology, such as artificial intelligence (AI) and machine learning, which can help increase efficiency and effectiveness in the HR management process (Pratama et al, 2023).

Data analysis is also an important skill that HR managers must have in the era of digital transformation. Employee data collected through various digital systems and tools can provide valuable insights into employee performance, satisfaction and development needs (Purnama, 2023). With data analysis capabilities, HR managers can make better decisions based on accurate information, and can identify trends and patterns that may not be visible without in-depth data analysis (Wahono & Ali, 2021). For example, data analysis can help in identifying high-potential employees, designing more effective training programs, and developing better employee retention strategies.

Apart from technical skills, adaptability and flexibility are also the keys to success for HR managers in facing changes in the era of digital transformation (Parinsi & Musa, 2023). Technology is developing rapidly, and organizations must be able to respond to these changes quickly. HR managers must be ready to continue learning and developing themselves, as well as encouraging an organizational culture that supports innovation and change (Sunarto, 2020). This includes promoting continuous learning, encouraging cross-functional collaboration, and creating a work environment that allows employees to adapt to technological changes and new work processes (Mokobombang & Natsir, 2024).

This research aims to identify and analyze strategies and implementation of digital transformation in human resource management (HR). By exploring the various approaches and technologies used, this research aims to understand how digitalization can increase the efficiency, effectiveness and responsiveness of HR management in organizations. The benefit of this research is that it provides practical insights for managers and HR practitioners in designing and implementing appropriate digital strategies, helping organizations overcome challenges arising from technological change, and maximizing the opportunities offered by digital technology. In addition, this research will contribute to the development of academic literature on digital transformation in HR management, as well as provide guidance for organizations in creating a more adaptive and innovative work environment in the digital era.

METHOD

The qualitative research method with a descriptive approach is an approach used to understand phenomena in depth in their natural context. According to Sugiyono (2016), qualitative research methods are often referred to as naturalistic research methods because the research is carried out in natural conditions or natural settings, without significant intervention from the researcher. In this approach, researchers try to explore the meaning and subjective perspectives of participants through collecting qualitative data, such as in-depth interviews, observations, and document analysis. The descriptive approach in qualitative research focuses on descriptions and in-depth understanding of the phenomena being researched, without generalizing or make predictions (Yuliana, 2022). Researchers attempt to describe conditions, experiences and perceptions in detail based on the data collected. The collected data, which can be words, images, or videos, is analyzed in a more interpretive way to provide a holistic understanding of the topic under study. With this

approach, researchers can capture the nuances and complexity of phenomena that may not be revealed through more structured and numerical quantitative methods.

RESULTS AND DISCUSSION

The strategy and implementation of digital transformation in human resource management (HR) involves the application of digital technology to improve various aspects of HR management in organizations. Here are some key strategies that can be implemented:

Use of HR Information Systems (HRIS)

Human Resources Information Systems (HRIS) are a crucial tool in the digital transformation of HR management, designed to manage employee-related data and processes in an integrated manner. With HRIS, organizations can automate various administrative functions such as payroll, attendance management, and recording employee personal data. The use of this system reduces the need for manual recording and allows faster and more accurate data access, thereby minimizing the risk of errors that often occur in paper or spreadsheet-based processes. In addition, HRIS allows the integration of various aspects of HR management in one centralized platform. This means that information related to recruitment, training, performance evaluation and employee development can be managed simultaneously, facilitating coordination between the HR department and line managers. With centralized access, relevant data can be easily retrieved for analysis and reporting, supporting more informed and strategic decision making. This integration also increases transparency in the HR management process and ensures that all employee data is available in real-time (Raflian, 2022).

The analytical features provided by HRIS are also one of the main advantages. These systems are often equipped with analytical tools that allow organizations to evaluate various employee performance metrics, absenteeism trends, and the effectiveness of training programs. This analysis helps in better HR planning, such as predicting future workforce needs, identifying areas for improvement, and measuring the impact of various HR initiatives. With data based on facts and figures, strategic decisions can be taken with greater confidence. In addition to operational benefits, HRIS also improves employee experience. With self-service access to the employee portal, employees can manage their personal information, apply for leave and check pay slips online. This not only improves efficiency but also provides convenience and transparency for employees, increasing their satisfaction and engagement. With responsive and user-friendly systems, organizations can create a more connected work environment and empower employees to better manage the administrative aspects of their work.

Digital Recruitment and Selection

Digital recruitment and selection has significantly changed the way organizations find and attract new talent. Online recruiting platforms, such as job websites, social media, and job search apps, enable companies to reach a wider and more diverse range of potential employees efficiently. Through the use of this technology, job openings can be announced quickly to a global audience, which helps attract candidates with a variety of backgrounds and skills. In addition, the use of digital tools in the recruitment process makes it easier to

search for candidates who have qualifications according to the company's needs, expands reach and increases the chances of finding the right candidate. Applicant tracking systems (ATS) are important tools in digital recruitment that automate many aspects of the application screening and management process. ATS can filter hundreds to thousands of applications based on predetermined criteria, such as work experience, skills and education. By using matching algorithms, ATS helps identify candidates who best match job requirements more efficiently compared to manual screening. This reduces the administrative workload on HR teams and speeds up the selection process, so organizations can fill vacant positions more quickly (Peicheva, 2022).

In addition, digital technology allows the use of technology-based evaluation tools to more accurately assess candidate competencies. Online skills tests, video interviews, and artificial intelligence (AI)-based assessments provide more objective and consistent ways to evaluate candidates. These tools not only speed up the selection process but also increase the accuracy of assessments, as they can measure candidates' technical and soft skills in a standardized way. This helps ensure that the selection process is more transparent and fair, reducing the possibility of bias and errors in judgment. By utilizing digital technology in recruitment and selection, organizations can achieve higher efficiency and better quality recruitment. A faster, more automated process allows HR teams to focus on strategic aspects of recruiting, such as building relationships with candidates and designing effective onboarding strategies. Additionally, a better candidate experience through easy-to-use applications and responsive communications can improve a company's image and attract the best talent in the market. Implementing the right digital recruitment strategy can be a key factor in achieving recruitment success and supporting organizational growth ..

E-Learning and Technology Based Learning

E-learning and technology-based learning have become important components in employee development strategies in the digital era. E-learning platforms offer significant flexibility by allowing employees to access training materials anytime and anywhere, using devices such as computers, tablets or smartphones. This not only makes it easier for employees to fit training schedules into their routines, but also allows companies to deliver training to multiple locations and branches simultaneously. With this method, organizations can reduce travel and logistics costs often associated with face-to-face training, as well as increase efficiency in disseminating training materials. Learning Management Systems (LMS) are key tools in e-learning that facilitate the delivery, tracking, and evaluation of training programs. LMS allows for centralized management of courses, simplifies administration, and provides useful analytical data for evaluating training progress and effectiveness. With features such as interactive quizzes, discussion forums, and practical assignments, LMS can increase participant engagement and deepen understanding of the material. Additionally, the ability to collect data on participants' participation and achievements allows companies to assess the impact of training and identify areas requiring improvement (Yazdi, 2012).

Technology-based learning also offers a variety of innovative methods to increase training effectiveness. For example, virtual simulations and augmented reality can be used

to create practical, interactive scenarios that help employees practice skills in a safe, controlled environment. This technology allows employees to learn from hands-on experience without the risk of costly mistakes in the real world. In addition, game-based learning (gamification) can be applied to make the training process more interesting and motivational, by providing incentives and challenges that encourage active participation. By utilizing e-learning and learning technology, companies can not only increase the efficiency and effectiveness of training programs but also create learning experiences that are more adaptive and responsive to individual needs. Technology enables customization of training materials based on each participant's skill level and progress, supporting a more personalized and relevant learning approach. Overall, implementing an e-learning strategy can improve employee competency, support continuous development, and help companies to remain competitive in an ever-growing market.

Employee Data Analysis

Employee data analysis is a crucial aspect of digital transformation in human resource management, which utilizes data to improve decision making and HR management strategies. By collecting data from various sources, such as HR information systems (HRIS), satisfaction surveys, and performance records, organizations can gain deep insight into their employees. This analysis includes a variety of metrics, such as absenteeism rates, productivity, job satisfaction, and retention, all of which can be mined to understand patterns and trends that impact employee performance and well-being. The use of analytical tools allows companies to perform more complex analysis, such as predictive analysis, which helps in forecasting workforce needs and identifying potential problems before they develop. For example, historical data on employee absenteeism and engagement can be used to predict likely turnover and plan more effective retention strategies. In addition, data analysis can help determine training needs more accurately, so that training programs can be tailored to the skills needed and areas that need improvement (Helmi et al, 2023).

Integrating employee data with analytics also facilitates more strategic, evidence-based decision making. With detailed and integrated data, HR managers can evaluate the effectiveness of HR initiatives, such as career development programs and work policies, and make more informed decisions about resource allocation and priorities. For example, data on employee performance can help in designing more equitable and impactful reward and recognition schemes, as well as in formulating policies that support work-life balance. In addition to operational and strategic benefits, employee data analysis also improves the employee experience by providing clearer and more targeted insights. With access to relevant data and feedback, employees can get constructive feedback on their performance, as well as see how their contributions relate to organizational goals. It supports transparency and clarity in evaluation and development processes, strengthens employee engagement and drives continuous improvement. Overall, employee data analysis provides a solid foundation for HR strategies that are more responsive and adaptive to needs and changes in the organization.

Digital-Based Performance Management

Digital-based performance management has changed the way organizations assess and monitor employee performance in a more efficient and transparent way. A digital-based performance management system provides a platform that allows goal setting, progress monitoring and performance evaluation to be carried out in real-time. With this digital tool, employees and managers can communicate goals and expectations, as well as track progress against set targets. These platforms often come with features such as performance dashboards, periodic reports, and feedback tools that allow both parties to monitor and assess performance on an ongoing basis. One of the main advantages of digital-based performance management is the ability to provide more frequent and timely feedback. This system allows managers to provide direct and continuous feedback to employees, replacing annual evaluation systems that are often considered less relevant. With more frequent feedback, employees can more quickly identify areas that need improvement and make necessary adjustments, increasing the chances of achieving set goals. Additionally, ongoing feedback can increase employee engagement and motivation, as they feel more cared for and supported in their development process.

Another feature that is often found in digital-based performance management systems is the ability to set and track KPIs (Key Performance Indicators) more effectively. This system allows organizations to define specific and relevant KPIs for various positions and levels within the organization, and measure performance based on these indicators. By using real-time data, managers can see performance trends, evaluate results, and make data-driven decisions for workforce development and planning. It also enables faster adjustments to targets and strategies, based on up-to-date performance analysis. Finally, digital-based performance management supports transparency and accountability in performance evaluation. These systems often include features for centralized documentation recording, reporting, and performance management, which facilitates the audit and review process. With well-documented data, the evaluation process becomes more objective and accountable, reducing the possibility of bias and error. It also provides a more solid basis for decisions regarding career development, rewards, and promotions, and helps create an organizational culture that is performance and results oriented.

Employee Experience Management (Employee Experience)

Employee experience management focuses on how companies create a positive and satisfying work environment, which has an impact on employee engagement, satisfaction and productivity. By utilizing digital technology, companies can improve aspects of the employee experience as a whole, from the onboarding process to career development and welfare. Digital platforms enable companies to provide easy access to important information, such as company policies, procedure guides, and communication tools, which helps employees feel more connected and empowered in their work environment. One important component of employee experience management is the regular collection and analysis of employee feedback. Digital technology enables the implementation of real-time satisfaction surveys and feedback tools that provide insight into how employees feel about various aspects of their work, such as the work environment, management, and

development opportunities. The data gathered from this feedback can be used to identify areas that need improvement and to design more targeted initiatives to improve the employee experience. With a quick and informed response, companies can take proactive action to increase employee satisfaction and engagement.

The use of technology also supports employee wellbeing initiatives by providing a digital platform for physical and mental wellbeing management. For example, an integrated wellbeing app can offer health programs, fitness training and mental health support that can be accessed at any time. Additionally, technology can be used to monitor work-life balance by giving employees access to tools that help them manage their time and manage stress. By prioritizing employee well-being through technology, companies can improve the quality of work life and reduce the risk of burnout and turnover. Finally, effective employee experience management focuses on creating clear and accessible career development paths through digital platforms. Technology-based career management systems enable employees to plan their development paths, access training courses, and monitor their progress against career goals. Additionally, this technology allows managers to provide regular feedback and guidance, as well as supporting individual goal setting and development planning. By providing tools and resources that support professional growth, companies can increase employee motivation and create more satisfying and rewarding career paths.

Application of Artificial Intelligence (AI) and Machine Learning

The application of artificial intelligence (AI) and machine learning in human resource management (HR) provides significant opportunities to improve the efficiency and effectiveness of various HR processes. One of the main applications of AI in HR is in recruitment, where the technology is used to screen applications and candidates using sophisticated matching algorithms. AI can analyze thousands of resumes and candidate profiles automatically, identifying candidates who best match job criteria based on existing data, and reducing the manual workload on recruitment teams. This process not only speeds up screening but also helps eliminate bias in the selection process, ensuring that the selected candidates are the best fit for the available role. Apart from recruitment, AI and machine learning can also be used to optimize employee performance management. AI-based systems can monitor and analyze performance data in real-time, providing deeper insights into productivity, strengths and areas for improvement. For example, AI can identify employee performance patterns and provide data-driven recommendations for employee development or adjustments to management strategies. With more accurate and timely information, managers can take action more quickly to improve individual and team performance, and design more effective interventions.

When it comes to HR planning and development, AI and machine learning play an important role in predictive analysis. This technology can be used to project future workforce needs by analyzing historical data and industry trends. For example, AI can help forecast future skills needs and identify potential shortages in the workforce. This allows companies to plan appropriate training and development and recruiting strategies to meet upcoming needs. With data-driven planning, organizations can be better prepared to face

market changes and dynamic business needs. Lastly, AI and machine learning can improve employee experience by providing personalization and automation solutions in various aspects of HR management. AI-based chatbots can help employees with routine questions or administrative issues directly and efficiently, providing quick access to information and support without having to wait for help from the HR team. Additionally, AI can be used to create onboarding experiences that are more interactive and tailored to individual needs, leading to faster adaptation and better integration into the company culture. By leveraging AI for automation and personalization, organizations can create a better employee experience and increase workplace satisfaction and engagement.

CONCLUSION

Digital transformation in human resource management (HR) has brought significant changes that improve efficiency, effectiveness and employee experience in the workplace. The use of an HR information system (HRIS) allows for more integrated and efficient employee data management, automates various administrative processes, and provides fast access to important information. Digital recruitment and selection has expanded the reach of candidate searches and increased the objectivity and speed of the screening process by using online platforms and applicant tracking systems (ATS). E-learning and technology-based learning provide greater flexibility and accessibility for employee training, as well as enabling the use of innovative methods such as simulation and gamification to increase learning effectiveness. Employee data analysis facilitates more evidence-based decision making and helps organizations plan workforce needs and evaluate performance in greater depth. Digital-based performance management offers more frequent and measurable feedback, and supports transparency and accountability in performance evaluation. Employee experience management with digital technology creates a more positive work environment by gathering real-time feedback, supporting wellbeing and providing a clear career development path. The application of artificial intelligence (AI) and machine learning increases efficiency in recruiting, performance analysis, HR planning, and employee experience with automation and personalization. Overall, digital transformation in HR management not only optimizes operational processes but also supports employee development and increases job satisfaction, which has an impact on the success and competitiveness of organizations in the digital era.

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