

The Role of Management Information Systems in Human Resource Competency Development

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ABSTRACT

In the era of globalisation and advances in information technology, companies or organisations are faced with increasingly fierce competition. Human Resources (HR) is one of the key factors that determine the success of a company in achieving its strategic goals. The competence of strong and qualified human resources is an important capital in increasing the competitiveness of the company. This research aims to identify and analyse how Management Information Systems (MIS) can effectively support the development of HR competencies, as well as identify factors that influence the application of MIS in the context of HR development. The current research type is qualitative. Data collection techniques include listening and recording important information to conduct data analysis through data reduction, data display, and conclusion drawing. The study results arrive at the expression that management information system plays a very important role in the development of HR competencies in various organisations and companies. It serves as a strategic tool to collect, store, manage and analyse HR-related data. With management information systems, companies can conduct efficient planning related to employee competency development, identify training needs, and monitor and evaluate the impact of competency development programmes.

Keyword: Management Information System, HR Competency, Qualitative

INTRODUCTION

In the contemporary era of globalisation and rapid advancements in information technology, companies and organisations encounter intensifying competition (Sutrisno et al., 2023). The Human Resources (HR) department plays a crucial role in determining the extent to which a company can achieve its strategic objectives (Prastyaningtyas et al., 2023). The proficiency of skilled and capable human resources is a crucial asset in enhancing the competitiveness of a company (Wahyoedi et al., 2023).

Given the ever-evolving nature of the business landscape, it is imperative for organisations to ensure that their workforce possesses pertinent skills and remains adaptable to meet the evolving market requirements. The development of human resources competencies encompasses multiple dimensions, including formal education, specialised training, practical work experience, and ongoing professional development (Gadzali, Ausat, et al., 2023).

Management information systems have proven to be an effective tool in supporting the human resource management process. Research results show that good implementation of management information systems increases the efficiency of HRM processes reduces

administrative errors, and increases accuracy in HR decision making (Smith & Johnson, 2018). In addition, management information systems also help speed up the flow of HR-related information throughout the company, allowing management to make more timely and informational decisions. Thus, this study concludes that Management Information Systems contribute positively to the effectiveness of human resource management in organisations. On the other hand, (Ahmad & Siti, 2019) conducted a study that aims to evaluate the effectiveness of the application of Human Resources Management Information Systems in the employee recruitment process in private companies. The research method used was surveys and interviews with 150 respondents consisting of HR managers, new employees, and information technology departments. The results showed that the use of HR management information systems significantly improved efficiency in the employee recruitment process. The implementation of HR management information systems has reduced the time required to screen applicants, increased accuracy in employee selection, and facilitated the integration of new employees into the organisation. In conclusion, the implementation of HR management information systems has a positive impact on human resource management, especially in the recruitment process. That is, management information systems provide a platform that allows companies to collect, store, manage, and analyse HR-related data efficiently. With management information systems, companies can track individual performance, identify training needs, and develop targeted employee development programmes.

However, in practice, many companies still do not fully utilise the potential of management information systems for HR competency development. This may be due to several reasons, such as a lack of understanding of the benefits of management information systems, technical or financial barriers, or internal resistance to change. In the past, several studies have stated that many companies have not optimally utilised the potential of Management Information Systems for Human Resource competency development. Some of the main barriers identified in this research are technical and financial barriers. The following are general points that reflect these findings:

1. **Technical Limitations:** Many companies, especially small and medium-sized enterprises (SMEs), may face technical limitations in adopting Management Information Systems (Ausat & Suherlan, 2021). This could be due to lack of adequate technology infrastructure, limited IT expertise within the organisation, or lack of accessibility to adequate devices and networks.
2. **Financial Limitations:** The implementation and development of Management Information Systems usually require significant financial investments (Salamah, 2023); (Hermansyah, 2023) and (Sukenti, 2023). For some companies, especially SMEs or organisations facing financial problems, limited budgets can be a major obstacle to adopting these systems.
3. **Lack of Awareness and Understanding:** Some companies may not have fully realised the benefits that Management Information Systems can provide in the development of HR competencies. Lack of understanding of the capabilities and potential of these systems may cause companies to be reluctant to invest in such technology (Ausat, 2023).
4. **Incompatibility with Existing Business Processes:** Sometimes, the available Management Information Systems may not fully match the existing business processes in the company (Trkman et al., 2015). This can be an obstacle, as companies may choose not to change their business processes or face difficulties in customising the system to their specific needs.
5. **Fear of Change and Uncertainty:** The implementation of Management Information Systems often involves changes in the way companies manage data and make decisions. The fear of change and the uncertainty of the outcome can make some companies hesitate to switch to a new system (Reio, 2020).

Hence, it is pertinent and imperative to undertake research on "The Significance of Management Information Systems in the Development of HR Competencies." The objective of this study is to examine and evaluate the efficacy of management information systems in facilitating the development of human resources competencies. Additionally, it seeks to identify the various factors that impact the implementation of management information systems within the realm of human resources development.

The anticipated outcomes of this research endeavour are poised to offer significant contributions to organisations by enhancing their comprehension of the significance of management information systems in fostering human resource competencies. The outcomes of this

study are anticipated to serve as a valuable resource for companies seeking to enhance the effectiveness of their human resources through the optimisation of management information systems. Furthermore, this study has the potential to offer valuable suggestions for policymakers aiming to enhance the adoption of management information systems within the realm of human resources development, specifically at the industry or sector level.

By comprehending the crucial significance of management information systems in cultivating HR competencies, it is anticipated that organisations can enhance their readiness to confront progressively intricate business challenges and guarantee that their HR possess pertinent competencies. This, in turn, enables them to contribute optimally towards the attainment of organisational objectives.

LITERATURE REVIEW

Management Information System

A Management Information System (MIS) is a system that has been specifically designed to gather, oversee, store, analyse, and furnish pertinent and precise information to leaders, managers, and decision-makers within an organisation. The primary objective of a management information system is to support management in the efficient and effective management of both operational and strategic aspects of the organisation (Fadhil et al., 2021). Key components of a Management Information System encompass:

1. **Data:** The field of management information systems encompasses the collection of data from diverse sources, including both internal and external entities affiliated with the organisation. The data may encompass a range of information pertaining to customers, financial transactions, inventory, employee performance, and other pertinent aspects that directly impact the company's operations and management.
2. **Data Processing:** Upon the completion of data collection, the management information systems will proceed to undergo a series of stages involving transformation and analysis. The aforementioned procedure encompasses the manipulation of data, converting unprocessed data into information that holds greater significance, along with conducting analysis to detect patterns, trends, or inferences that can facilitate the process of making informed decisions.
3. **Information:** The field of management information systems is responsible for generating pertinent and valuable information that aids in the effective management of an organisation. The information can manifest in diverse formats such as financial reports, sales reports, employee performance analysis, product demand forecasts, and other pertinent forms of data that facilitate managerial comprehension of the company's state and informed decision-making.
4. **Technology:** Management information systems (MIS) are underpinned by a technological infrastructure that encompasses hardware components such as computers, servers, and networks. Additionally, MIS relies on specialised application software designed for data management and analysis, as well as databases that facilitate the storage and retrieval of information.
5. **Users:** Management information systems (MIS) are specifically developed for utilisation by organisational leaders and managers. The typical users of management information systems (MIS) encompass executive management, department managers, and high-level personnel who bear the responsibility of strategic decision-making.

One of the advantages associated with Management Information Systems (MIS) is the enhancement of decision-making processes (Ali, 2019). By providing management with precise and current information, MIS enables them to make decisions that are well-informed and based on data-driven insights (Szukits, 2022). Furthermore, the implementation of management information systems enables companies to streamline operational processes, minimise instances of human error, and enhance overall efficiency in the execution of daily activities. Thirdly, the implementation of management information systems in organisations facilitates enhanced management of human resources (Suharti & Sulisty, 2018). This includes various dimensions such as recruitment, training, performance evaluation, and employee growth and advancement. Fourthly, the development of business strategy is facilitated by the utilisation of management information systems (Gaol et al., 2020). These systems aid management in the critical tasks of analysing the

performance of the company, identifying potential opportunities and challenges, and formulating comprehensive long-term strategies for the business. Furthermore, enhanced responsiveness is achieved as a result of expedited access to pertinent information, enabling companies to promptly adapt to shifts in the market and meet the demands of their customers.

The significance of Management Information Systems (MIS) has witnessed a notable surge in tandem with the advancements in information technology. The strategic utilisation of management information systems can confer a competitive edge upon organisations, enabling them to maintain their relevance within a progressively intricate and rapidly evolving commercial milieu.

Human Resource Competency

HR competencies encompass a comprehensive array of knowledge, skills, attitudes, and personality traits that are possessed by individuals within an organisation or company (Gadzali, Gazalin, et al., 2023). These competencies serve as the foundation for evaluating the degree to which individuals can excel in their roles or positions, and make valuable contributions towards attaining organisational objectives (Az-zaakiyyah et al., 2022). The significance of HR competencies resides in the calibre and pertinence of the skills possessed by employees or team members in executing their obligations and roles. The following are several components that constitute HR Competence:

1. **Knowledge:** This is the theoretical and conceptual aspect that includes understanding and expertise in a particular field. For example, knowledge of the latest technology, work procedures, or relevant regulations.
2. **Skills:** This is the practical aspect that involves the ability to perform a task or activity well. Skills can be technical, such as the ability to operate equipment, or interpersonal skills, such as communication or leadership abilities.
3. **Attitude:** This is an aspect that reflects an individual's mental or emotional attitude towards work, co-workers, and the company. A positive attitude, such as enthusiasm, motivation and openness to change, can have a positive impact on performance.
4. **Personality traits:** These are aspects related to an individual's personal characteristics, such as integrity, honesty, responsibility and ability to work in a team.

The significance of HR competence within an organisation is of great importance. Companies can reap various advantages by ensuring that their employees possess competencies that align with the requirements of their respective roles. One primary benefit is enhanced performance, as employees who possess job-relevant competencies are more likely to exhibit superior performance and increased productivity (Diawati et al., 2023). Additionally, employee development is reliant on the competencies of the HR department, as they serve as the foundation for designing and implementing training and educational initiatives that cater to the specific requirements of both individuals and the organisation as a whole. Thirdly, operational efficiency can be enhanced by employing individuals who possess the appropriate skill sets, thereby enabling companies to streamline their business operations (Handoyo et al., 2023). Furthermore, the presence of employees with exceptional competencies can confer a competitive edge to the company within a highly competitive market. Furthermore, the presence of employees who possess robust competencies will enhance their ability to effectively adjust to changes and actively participate in fostering innovation within the organisation.

Hence, it is imperative for organisations to consistently administer competency assessments during various stages, such as recruitment, performance evaluation, and employee career advancement. Therefore, organisations can ensure that their workforce possesses competencies that are suitable and pertinent to the requirements of the position and the dynamic business landscape.

RESEARCH METHOD

This research aims to analyse the role of management information systems in HR development. In this study, researchers conducted library research so that there was no need to go directly to the field during the data collection process, but rather examine various reference sources that support this research. The literature was obtained from online media and databases from journal

portals that are in accordance with the keywords related to this discussion, namely the role of management information systems in HR development. The author does not focus on specific journal portals or online media in determining relevant reference sources such as referring to the Emerald Insight, ResearchGate, and Elsevier journal portals, but is more flexible. In this article, with a focus on the role of management information systems in HR development, the author makes these keywords the focus of the search so as not to widen the main discussion. The search for journals, articles and publications was mostly in the range of articles published between 2010 and 2023. Not all articles, journals and publications that appear in the search results will be used, but only those related to the role of management information systems in HR development.

This research is a type of qualitative research. Data collection techniques include listening and recording important information to conduct data analysis through data reduction, data display, and conclusion drawing to obtain a picture of the conclusions regarding the literature study that will be developed in this study. Data validation uses triangulation of data sources.

RESULTS AND DISCUSSION

The utilisation of Management Information Systems (MIS) plays a pivotal role in fostering the growth and enhancement of Human Resources (HR) capabilities within diverse organisations and corporations. The development of HR competencies is a crucial and strategic process aimed at enhancing the productivity, efficiency, and quality of service within an organisation (Ramlall, 2006). In the context of the current era of globalisation and the advent of the fourth industrial revolution, the significance of management information systems has grown exponentially. These systems play a pivotal role in enabling companies to effectively navigate the intensifying competition and swiftly evolving market dynamics.

The primary function of management information systems in the context of HR competency development is to gather, retain, and oversee data pertaining to human resources within the organisation. The dataset encompasses various aspects related to employees, such as their qualifications, work experience, training participation, certifications, and performance evaluations. By implementing a dependable management information system, organisations are able to perform comprehensive analyses of human resources data, which encompasses the identification of employee training and development requirements. The utilisation of data in the HR competency planning and development process is significantly facilitated by the implementation of a management information system (Memon et al., 2022). Through the process of conducting a needs analysis, organisations have the ability to ascertain suitable training programmes and formulate career development strategies for their employees. The utilisation of management information systems enables organisations to enhance the efficiency and effectiveness of their management of training, workshops, seminars, and other development programmes (Cui et al., 2023).

Management Information Systems (MIS) play a crucial role in the monitoring and evaluation of HR competency development programmes. By monitoring performance data prior to and subsequent to training, organisations can assess the extent to which it enhances employee qualifications and performance (Siddiqui, 2014). This evaluation enables the organisation to determine the efficacy of the current programme and ascertain whether adjustments and enhancements are necessary. The management information systems (MIS) also enable employees to access information pertaining to training, supporting resources, and other HR competency development-related information (Silva & Lima, 2018). Employees have the ability to retrieve information pertaining to the various training programmes that are available, including details such as training schedules, training materials, and the specific criteria and prerequisites for participating in particular training sessions. This initiative promotes transparency and ensures equitable opportunities for all employees to enhance their professional growth in alignment with their individual needs.

In contrast, the implementation of a management information system (MIS) contributes to the enhancement of HR management efficiency through the automation of various administrative tasks associated with HR data and training (Ali Quaosar & Rahman, 2021). This practise mitigates the administrative burden on HR personnel, enabling them to allocate more attention towards enhancing HR competency development strategies. The utilisation of automated processes enables

swift and precise access and management of information, thereby empowering companies to make data-driven decisions with enhanced accuracy (Haleem et al., 2022). By conducting an analysis of historical data, management information systems can also contribute to the prediction of future human resources requirements. By acquiring a more comprehensive comprehension of labour trends and the required competencies in particular industries, companies can enhance their readiness to tackle forthcoming challenges and capitalise on potential opportunities. The utilisation of management information systems in this context facilitates companies in effectively addressing and adapting to alterations, thereby enabling them to sustain competitiveness within a dynamic market environment.

The significance of Management Information Systems in enhancing HR competency development is growing in importance as organisations strive to enhance their competitiveness and achieve success (Ben Moussa & El Arbi, 2020). The software enables the gathering, organisation, examination of human resources data, in addition to the strategizing and assessment of employee competency enhancement initiatives. By leveraging management information systems, organisations can enhance the utilisation of human resources, anticipate forthcoming HR requirements, and enable employees to maximise their capabilities.

Moreover, Management Information Systems play a crucial role in serving as a valuable instrument for facilitating strategic decision-making pertaining to the enhancement of human resources competencies. The collection and storage of data within management information systems can offer valuable insights to management regarding the prioritisation of competency development, identification of weaknesses within specific teams or departments, and estimation of the success rate of development programme implementation. Based on the provided information, management can enhance their decision-making process by gaining a deeper understanding of employee quality and productivity, thereby striving for overall improvement (Abubakar et al., 2019). Furthermore, the utilisation of Management Information Systems can effectively facilitate and promote employee engagement in the process of enhancing their competencies (Awan et al., 2020). Employees have the capability to access their individualised data, review their training history, and track their advancement towards attaining career development objectives (Rustiawan et al., 2023). This initiative contributes to the establishment of a transparent organisational environment, fostering a sense of appreciation among employees who perceive the company's commitment to their professional growth and advancement.

Certain industries require companies to meet specific compliance and regulatory standards regarding the development of human resources competencies. Management information systems (MIS) play a crucial role in facilitating the acquisition of pertinent data to assess a company's adherence to regulatory requirements and industry standards. During an audit, the management information systems (MIS) play a crucial role in ensuring comprehensive documentation and convenient accessibility of pertinent information. This, in turn, guarantees the company's adherence to relevant regulations and compliance standards. Management Information Systems (MIS) play a crucial role in facilitating integration with other systems within an organisation. As an illustration, it has the capability to establish a connection with performance management systems, thereby facilitating the provision of employee performance data and aligning training outcomes with individual performance objectives. This form of integration enables organisations to attain a comprehensive comprehension of employee development and its influence on the overall performance of the organisation. Moreover, in the current epoch of digital transformation, the significance of management information systems has escalated significantly. In order to remain competitive in the ever-changing business landscape, organisations are compelled to adjust their operations to accommodate emerging technologies. One such instrumental tool that facilitates effective management of these transformations is the management information system. The incorporation of cutting-edge technologies, such as artificial intelligence (AI) and data analytics, within the framework of management information systems facilitates companies in acquiring profound understandings of human resource (HR) requirements and delivering prompt suggestions for enhancing competencies.

In contemporary business environments characterised by dynamic transformations, the cultivation of human resources competencies emerges as a pivotal factor contributing to the

achievement of organisational success. The Management Information System (MIS) serves as a strategic instrument that facilitates the acquisition, examination, and administration of human resources (HR) data. Additionally, it aids in the formulation, execution, and assessment of initiatives aimed at enhancing competency development. Companies can enhance the calibre of their workforce, boost operational efficiency, ascertain employee potential, and effectively confront the obstacles posed by digital transformation through the utilisation of a robust management information systems.

CONCLUSION

Based on the aforementioned analysis, it can be inferred that Management Information Systems (MIS) play a pivotal role in fostering the growth of Human Resources (HR) capabilities within diverse organisations and corporations. The aforementioned tool functions as a strategic instrument for the purpose of gathering, storing, administering, and analysing data pertaining to human resources. Management information systems (MIS) enable companies to effectively engage in strategic planning pertaining to the development of employee competencies. This includes the ability to identify training requirements, as well as monitor and assess the effectiveness of competency development initiatives. Furthermore, the management information system also promotes employee engagement in the process of career development, facilitates the acquisition of pertinent information, and aids in the facilitation of strategic decision-making. Moreover, this study has proposed a recommendation among various alternatives:

- a) Invest in a Reliable Management Information System: Companies need to invest sufficient resources to build or adopt a reliable management information system that meets the needs of the organisation. A reliable management information system will help improve efficiency and effectiveness in HR management and competency development.
- b) Involve Employees in the Competency Development Process: Engaging employees in the competency development process is an important step to increase their participation and involvement in career development. By providing access to management information systems and inviting employees to participate in the planning and evaluation of development programmes, companies can create a work climate that focuses on professional development.
- c) Use Data for Strategic Decision Making: Companies should utilise data collected through management information systems to inform strategic decision-making related to competency development. Performance data, training needs, and workforce trends should be used to design effective and relevant development plans.
- d) Management information systems Integration with Other Systems: Management information systems integration with other systems, such as performance management systems or staffing systems, helps provide a more holistic view of HR competency development. In this way, companies can match training outcomes with individual performance goals, as well as optimise the impact of development programmes.
- e) Maintain Regulatory Compliance: Ensure that the management information system meets the compliance and regulatory standards applicable in the industry or country where the company operates. A management information system that adheres to data security and privacy standards will save the company from legal issues and reputational damage.
- f) Raise Awareness of the Importance of Competency Development: The entire organisation needs to recognise the importance of competency development as a long-term investment in the success of the company. Education and awareness of the benefits of competency development programmes will encourage support from management and employees.

By following the above suggestions, companies will be able to increase the use of management information systems as a strategic tool in HR competency development. In this ever-changing and competitive era, focusing on people development is key to achieving competitive advantage and ensuring long-term organisational success.

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