

Electronics Human Resource Management in Society 5.0

¹Badrul Aini, ²Kariwardati, ³Mardalia, ⁴Khuzaini, ⁵Syahrial Shaddiq

^{1,2,3,4,5}Universitas Islam Kalimantan (UNISKA)

⁵Universitas Lambung Mangkurat (ULM)

Corresponding email: badrulerfan@gmail.com

This research aimed to analyze the implementation of Electronic Human Resource Management (EHRM) in Indonesia. The approach used in this research was descriptive qualitative research which aims to provide an overview of the focus of this research. The results of the first study were the implementation of EHRM in Indonesia and motivated by management's awareness of the era of technological development, where control was fully aware that utilizing Information and Communication Technology (ICT) developments in Indonesian territory. Then it can create a better organizational future, as well as improve the quality of work and service. Secondly, in preparing for the implementation of EHRM, the management of all regions in Indonesia took several steps, namely; survey and analysis of work needs in each existing field, carrying out planning in society 5.0.

Keywords: Electronics, Human, Resource, Management, Society 5.0.

A. INTRODUCTION

The world is experiencing very rapid changes known as the Industrial Revolution 4.0. What is meant by this revolution is a change in the production process which is characterized, among others, by the use of the internet, robots, automation and the use of artificial intelligence. (Cahyono, 2018) In a very rapid change, the role of society, government, organizations and others also changes rapidly. They are required to change in order to adapt and survive the pressures of life (Bailey, Mankin, Keliher, & Garavan, 2018).

To respond to the challenges of globalization and to be able to compete on a global scale, we have no choice but to develop quality and effective Human Resources (HR). They must be intelligent, competent, have Human Resource management skills, have the ability and willingness to learn and lead learning organizations, and be able to create human resources and collaborate with others on an equal basis, rather than acting like something for them (Ozkeser, 2019).

Human Resource Development is the process of developing and issuing professional capabilities for the purpose of improving performance through organizational development and training and personnel development (Holton III, 2002). Human Resource Development is based on the belief that organizations are man-made entities that rely on human expertise to set and achieve their goals and Human Resource Development professionals are advocates of individuals and groups, work processes and organizational integrity. Several models of Human Resource Development define a set of practices that, if pursued, are likely to contribute to the human, capital accumulation on which an organization can build its competitive advantage (Shaddiq & Irpan, 2023).

The Human Resource Development function differs from the personnel function outlining the following roles of a Human Resource Development manager: (Rao, 2007)

1. Develop enabling capabilities in individuals and systems.
2. Integrate people development with organizational development.
3. Maximizing individual learning opportunities within the organization through various mechanisms, autonomy, and responsibility.

4. Decentralization, delegation, and shared responsibility..
5. Balancing change and adaptation.
6. Establish feedback and reinforcement mechanisms, etc

The development of information and communication technology is a new way to bring the organization to achieve success. The key to the success of an organization is its human resources (HR). HR plays a central role in the organization (Mardhatillah Yos Indra., Nasution Harmein., 2013). For this reason, many organizations have taken various ways to improve the quality of their human resources, one of which is by utilizing information and communication technology (ICT) developments (Ardianti et al., 2023).

The development of ICT which is currently being developed and used by various organizations is EHRM. Marler and Fisher (2014) explain that EHRM is a set of patterns used to manage Human Resources in organizations to create a competitive advantage and realize organizational goals. EHRM is also defined as a way to create and implement quality human resource management (HRM) based on information and communication technology (Bondarouk., 2014). Thus it is clear that the main characteristic of EHRM is ICT-based so that activities supported by EHRM no longer depend entirely on face-to-face meetings (Irpan & Shaddiq, 2023).

The implementation of EHRM provides time and cost efficiency for organizations. In addition, the application of this technology also provides convenience in business processes, increases information flow and organizational performance, centralized data management, optimizes the development and productivity of Human Resources, and increases employee satisfaction which of course has an impact on employee productivity. (Yusliza Mohd, Rahmayah, 2014) noted that more than 2300 organizations from 23 European countries have used the Human Resource Management (EHRM) system. The system has also been implemented by various universities such as the University of York, University of South Australia, London Metropolitan University, Oxford University City University, Sokoto University in Nigeria, and Alicante University in Spain, while in India this system has also been implemented by SRM University and a well-known technology company, namely India Tech (Tabiu & Bakar & Nura, 2013).

In order not to cause problems in implementing EHRM, organizations need to pay attention to several important things which are the key to implementing EHRM. Steps that must be considered in implementing EHRM such as costs, information, and communication technology infrastructure, readiness of human resources, easy application design, and guaranteeing the confidentiality of employee personal data, and legal instruments, because EHRM is closely related to the creation, distribution of data or information and intellectual property rights that must be protected by law (Yusri & Yahya, 2023). The role of management is needed to change paradigms, ways of thinking, ways of behaving, and ways of working and behaving so that employees can accept the implementation of EHRM.

B. FORMULATION OF THE PROBLEM

1. What is the Impact of EHRM on Human Resource Management (HRM) Practices in Indonesia?
2. How is the Overall Process of Preparation and Implementation of EHRM in Indonesia?

C. LITERATURE REVIEW

1. Definition of Human Resource Development

Human resources (HR) is an integrated ability of the mind and physical power possessed by an individual. These abilities will then be deployed to contribute to the organization through the implementation of duties and responsibilities (Mardhatillah Yos Indra., Nasution Harmein., 2013) defines human resource management as a management activity that includes utilization, development, appraisal, remuneration, ways to design planning systems, employee arrangements, career management, performance evaluation, employee compensation, and employment relations, to achieve individual and organizational goals. Apart from that, HRM is also defined as a science and art that regulates the human element (creativity, taste, and intention) as an asset of an organization by obtaining, developing, and maintaining a workforce effectively and efficiently

(Tjahjono, 2005). Based on some of these meanings, it can be concluded that human resource management is a set of ways or systems that utilize humans to achieve individual and organizational goals.

2. *EHRM*

Tavakoli Gholaremza (2015) explains that EHRM is a set of innovative ways that function to overhaul traditional systems in organizations to improve human resource performance (HRM) and provide competitive advantages for organizations. Veidhoven, then Yusliza & Rahmayah (2014) explains EHRM as administrative support from the HR function in organizations using information and communication technology. EHRM is also defined as a method used to manage HR in an organization to realize organizational goals and create and implement quality human resource management (HRM) based on information and communication technology.

3. *The Benefit of EHRM*

The implementation of EHRM provides positive benefits for the organization. EHRM helps employees to catch up on their daily work (Gholaremza, 2015), providing the HR function with opportunities to create new avenues to contribute to organizational effectiveness through means such as knowledge management and creation of intellectual and social capital (Yusliza & Rahmayah, 2014). Furthermore, (Manivannan S.K, 2013) states that EHRM helps many organizations to build a more committed workforce. In addition, the presence of EHRM makes it easier for employees to access information about their duties and obligations, as well as access data and process data related to personal data such as information about salaries, employee personal data, performance management, training, recruitment and others (Tabiu & Bakar & Nura, 2013). By looking at the various benefits mentioned above, it can be concluded that implementing EHRM provides time and cost efficiency for organizations. In addition, the implementation of the system also provides convenience in business processes, increases information flow and organizational performance, centralized data management, optimizes the development and productivity of Human Resources (HR), and increases

employee satisfaction which of course has an impact on employee productivity.

4. *The Intended Use of EHRM*

EHRM assists organizations in managing their Human Resources (HR) and provides added value to the role of Human Resources (HRM) in organizations which certainly influences the competitive advantage of organizations or companies (Marler & Fisher, 2014). EHRM also helps organizations to improve service quality (Bondarouk., 2014), whereas (Arenawati, 2012) explains that EHRM provides time and cost efficiency for various activities within the organization.

5. *Types of EHRM*

EHRM itself consists of 3 types. the three types of EHRM are as follows:

- a. Operational EHRM : related to basic HRM activities for administration and information functions .
- b. Relational EHRM: related to basic HRM activities to support business processes.
- c. Transformational EHRM: related to strategic HRM activities.

6. *Steps of EHRM*

Before implementing EHRM, organizations need to pay attention to several important things which are the key or main requirements for implementing EHRM in organizations, (Arenawati, 2012) outlines The steps that must be considered in implementing EHRM namely sufficient costs, ICT infrastructure, availability of internet networks, readiness of human resources, application designs that facilitate work and guarantee the confidentiality of employee personal data, legal instruments, paradigm changes, where in this case the role of management is needed to change paradigms, ways of thinking, ways and ways of working and behaving so that employees can properly accept the implementation of EHRM within the organization, and finally the support from all parties within the organization.

7. *Problems in Implementation of EHRM*

Even though the implementation of EHRM provides positive benefits for the organization, if it is not planned properly and implemented wisely, it

will cause problems and obstacles for the organization. Several studies have shown that there is a negative impact if an organization implements EHRM unwisely and without proper planning (Manivannan, 2013) in his research found obstacles in the implementation of EHRM in the form of technical barriers which include internet networks, application designs and the level of complexity in operating applications, and the strong traditional culture in carrying out tasks. (Marler & Fisher, 2014) explains that problems or negative impacts in the implementation of EHRM by organizations are caused by a lack of socialization of use which has an impact on personal knowledge, inadequate organizational size and facilities to implement EHRM, support and perceptions from colleagues. These factors are data confidentiality, where EHRM allows employees to send and retrieve their data and information electronically, so application capabilities are needed that can maintain the confidentiality of these data. The next factor is communication. The ability of the system to allow users to interact with other people also influences the satisfaction of the users of the system itself.

D. RESULTS AND DISCUSSION

1. The Impact of EHRM on Human Resource Management Practices in Indonesia

The concept of EHRM is inseparable from the general understanding of human resource management. Electronic Human Resource Management (HRM). It can be said that EHRM is the application of HRM functions in information and communication technology applications. Through EHRM, the implementation of the functions of Human Resource Management (HRM) is supported by ICT technology, where applications that have been specially designed by the needs related to the function of Human Resource Management (HRM) are included in the computer itself. EHRM also has a major impact on Human Resource Management (HRM) practices, such as the following:

Table 1
Impact of EHRM on HRM

Practice HRM	Impact EHRM
Job Analysis and Design	Employees in geographically dispersed locations can work together in teams using video, email, and audio.
Recruitment	Disseminating information on job vacancies online, and providing online registration counters so that applicants can apply online.
Training	Learning and training can be done online anywhere and anytime.
Selection	Simulations - online simulations which include video and email tests that can measure the ability of prospective employees to face job challenges.
Compensation and Benefits	Employees can review information about their salaries and bonuses and find out about information and benefits plans.

Source: Arenawati, 2012

When an organization decides to make a change, of course, it is based on clear goals. The main thing that organizations do in making changes is, of course, to find new patterns or to update ways of using existing resources and capabilities to increase the organization's ability to create value and increase the desired results (Stoner James. Freeman Edward. Gilbert Daniel, 1996)

The system that has been implemented since 2002 aims to support all main activities to improve the quality of work and service. This application also aims to create savings in operational costs and working time, as well as access to information without any restrictions. Seeing what is the background and main purpose of implementing EHRM, shows that the management fully understands that EHRM is an application that supports

all main activities, especially those related to the main functions of Human Resource Management (HRM), which aims to improve the quality of work and services to achieve what is the main goal in Indonesia.

In implementing EHRM management requires awareness, namely awareness of how important it is to utilize ICT. This awareness is proof that the management in Indonesia, both the center and all regions of Indonesia have sensitivity to ICT developments.

2. Comprehensive Process of Preparation and Implementation of EHRM in Indonesia

Making changes is not an easy thing, especially when it comes to changing systems or ways of working from manual to ICT-based forms or work systems. Observing the preparatory stages carried out, it can be seen that there was an effort to gather information regarding the needs of each existing sector and to describe those needs. In making changes, it is necessary to know the needs that exist in each area of the organization, so that the changes made can meet these needs, and are also aligned with the goals to be achieved. Change and development have to do with the main goals of the organization itself. Next, what is done is to conceptualize the type and model of the application to be used. The success of implementing ICT systems in organizations is influenced by the clarity of the applications to be used so that the main needs to be met can be by the applications implemented. The next step is to plan and analyze the budget that will be used. Budget analysis is beneficial in avoiding confusion and providing clear direction for what the organization wants to achieve.

The next preparatory stage is analyzing the existing infrastructure. Given that conceptual things must be applied in technology, it is important to reconsider the existing infrastructure, because after all this certainly has an impact on the success of implementing ICT in organizations. Furthermore, what is done as preparation is the dissemination of information or socialization, where this is done by maximizing the role of each existing head of division as a medium for expanding information to all employees regarding planning for the implementation of EHRM in Indonesia and all

regions in Indonesia. This process aims to build involvement, approval, and support from various parties within the organization.

The follow-up is to prepare the existing Human Resources (HR) so that all parties will be able to properly use the EHRM implemented in Indonesia. This is done by providing an introduction program about the system to be implemented so that it can prepare employees, open mindsets, provide an overview and increase knowledge and make employees competent in Human Resources (HR). Preparing Human Resources (HR) as users of the system to be implemented is important. Management involvement in providing information is a form of concern for creating competent Human Resources. Observing the preparatory stages before implementing EHRM carried out in Indonesia, researchers found several things that were not disclosed (Arenawati, 2012). The following is a comparison of the preparatory stages before implementing EHRM as disclosed by (Arenawati, 2012) with the results of this study:

Table 2

Comparison of the Preparation Stages for the Implementation of EHRM by (Arenawati, 2012) with the results of the research conducted

Arenawati (2012)	Results
Preparation of funds / costs	Analysis of work needs in each field
Infrastructure availability analysis	Planning application concept
Level of network connectivity and availability	Analysis of the application concept with the types of needs in each field
Application Design	Infrastructure analysis
Legal device	Budget Analysis
A paradigm shift	Expanding the information, and each head of the field becomes a medium for expanding that information
Preparing HR	Preparing HR

Source: Arenawati 2012

The results of the research show that the implementation preparation process carried out in Indonesia still faces obstacles, where these constraints are in the form of technical constraints. Furthermore, the obstacles for the Indonesian state in implementing EHRM are matters relating to inter-sectoral coordination. The handling of this problem is carried out by reaffirming coordination between existing sectors. Through the problems that arise and their handling, it can be seen that in solving the obstacles that arise in the process of preparing for the implementation of EHRM, firmness is needed to carry out resolutions and a quick response to the core of the problem. Coordination is important, bearing in mind that the implementation of EHRM is an important matter regarding shared needs within the organization, so good communication between departments within the organization is also a supporting factor in the implementation of EHRM. Establishing good communication relationships is one of the keys to the success of the organization itself.

Furthermore, what is done in Indonesia in implementing EHRM as a whole is conducting a feasibility trial of the applied EHRM. This step shows that the process of implementing EHRM as a whole requires concentration, accuracy, and thoroughness. This effort simultaneously answers whether the implemented EHRM can meet the main needs within the organization, and also whether the implemented EHRM is aligned with organizational goals or not. Because the implementation of EHRM is a form of organizational change, this change must answer the main needs of the organization and be aligned with the goals of the organization itself (Stoner James. Freeman Edward. Gilbert Daniel, 1996).

In connection with the implementation of EHRM in Indonesia to bring change and progress, what will be done next is to provide training and debriefing on EHRM for employees, because one of the goals of EHRM is to provide added value for the role of Human Resources (HRM) which influences competitive advantage and service quality, then the steps taken in Indonesia in this regard are the right thing because it involves Human Resources (HR) as users of the implemented system is a manifestation of

concern for Human Resources (HR) and efforts to create competent Human Resources (HR) within the organization.

E. CONCLUSION

The implementation of EHRM in Indonesia was motivated by management's awareness of the era of technological development, where management is fully aware that utilizing ICT developments in Indonesian territory, can create a better organizational future, as well as improve the quality of work and service.

In preparing for the implementation of EHRM, the management of all regions in Indonesia took several steps, namely; survey and analysis of work needs in each existing field, carrying out planning

As well as concept analysis of the application to be used, infrastructure analysis, budget analysis and planning, expanding information, and preparing existing Human Resources (HR). In the process of preparing for implementation in Indonesia, there were obstacles in the form of technical and coordination constraints. The handling of this obstacle is carried out by reaffirming communication and coordination between existing fields and other parties who also support the success of the existing process, as well as independently preparing matters that become technical needs.

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