

A Review of Digital Human Resource Management: Transforming HR Practices Through Technology

 Sameulhaq Amany

<https://doi.org/10.69760/lumin.20250001011>

Digital Human Resource Management is a digital transformation in human resource practices and processes through the use of electronic media, mobile, analytics and information technology to make human resource management more efficient. In other words, digital human resource management basically performs or manages all human resource work using soft technologies, applications and the internet.

Digitalization or digital transformation is something that all organizations must bring to be efficient and relevant in the future. Otherwise, they will be left behind by other organizations in the market industry. This study reviews several studies and discusses the concept and various aspects of digital human resource management.

This study mainly relied on secondary data. The findings of this study are important for organizations to help them effectively implement digital human resource management and thereby improve their performance. Furthermore, the findings can help researchers by providing a basis for understanding the impact of digital human resources on organizational performance.

Keywords: Human Resource Management, Digitalization, Technology

INTRODUCTION

Today, concepts such as “digitalization”², “digitalization”³, “digital transformation”⁴ or “digital disruption”⁵ are among the most prominent and discussed terms. In general, such concepts indicate the increasing use of technology, and the corresponding fundamental changes in various areas of business and society. This concept is also true for the field of human resource management.⁶

In human resource management, the concept of digital human resource management, (Thite, 2019; Pantelidis, 2019), and related concepts such as digitalization, (Meijerink et al., 2018; Van Kruining 2017), digital transformation, (Bissola and Imperatori, 2018; Vardarlier, 2020) and digital disruption (Larkin, 2017; Platanou and Mäkelä, 2016) are increasingly used in human resource management. However, at present, these concepts are often used in an implicit, heterogeneous, and incremental way.

First, authors frequently use concepts in an implicit way. That is, they do not provide explicit definitions but assume that readers understand the intended meaning (e.g., Bajer, 2017; Larkin, 2017).

¹ Sameulhaq Amany Master's student in Administration and Economics, Sabahattin Zaim University, Türkiye, sameulhaq.amany01@gmail.com, <https://orcid.org/0009-0009-4681-2761>

² Digitization

³ Digitalization

⁴ Digital Transformation

⁵ Digital Disruption

⁶ Human Resource Management

Second, authors use concepts in an incoherent way. That is, they use concepts with multiple and sometimes contradictory understandings (e.g., understanding disorder).

Third, authors frequently use concepts in an incremental way (Larkin, 2017, and Platanou and Mäkelä, 2016),

That is, they use new concepts to represent old, well-known phenomena (e.g., Martini and Cavenago 2019; Thite, 2018). It is clear that the current discussion on digital HRM lacks “conceptual clarity.” However, conceptual clarity is important for several interrelated reasons.

First, conceptual clarity is important to avoid the mere duplication of concepts (Suddaby, 2010). (It should be ensured that digital HRM (and related concepts) do not simply represent “new definitions for old phenomena”. Otherwise, new concepts are used only as synonyms for established concepts and in particular the prominent concept of electronic (e-) HRM, e.g. (Bondarouk et al. 2016; Strohmeier, 2007).

Second, conceptual clarity is essential to avoid confusion and misunderstanding. (Suddaby, 2010) It should be ensured that human resource (HR) researchers have a common understanding that facilitates cross-communication in digital HRM.

Third, conceptual clarity is essential to avoid research gaps (Suddaby, 2010). Ill-defined terms should be avoided, as they do not allow precise operationalization and lead to divergent research results on digital HRM. Given this background, the aim of this paper is to provide a conceptual explanation of digital HRM.

DIGITAL HUMAN RESOURCE MANAGEMENT

To understand the concept of digital human resource management more deeply, it is necessary to define the meaning of human resource management. According to Huselid (1995), the most important areas of human resource management practice are: “recruitment and selection, socialization, job design, training and development, participation, career development, performance appraisal, employee rewards and job security”.

Furthermore, Bredin & Söderlund (2011) explained human resource management as practices related to the relationship between employees and the organization in which they work. Furthermore, HRM can be explained as the management of human resources in order to enable the organization to grow.

The development of information technology has played a key role in the evolution of HRM (Kavanagh & Johnson, 2009) (In the business world, digital technologies are changing every aspect of HRM from recruiting and hiring new employees, training and development, performance appraisal and rewards and compensation), Maditheti (2017) (Therefore, a comprehensive transformation from traditional to digital in terms of HRM policies and strategies and the way HRM practices are implemented is needed.

According to Meditti¹, digital basically manages all HRM functions through technologies, applications and the internet. There should also be innovations in HRM practices for recruiting, rewarding and evaluating employees. Digital HRM also has an impact on the way employees are trained. (Saini, 2018).

U (2016) in a study conducted at the University of Sub-Saharan Africa found that the maximum percentage of employees agree that HRM-E enhances their performance. It also studied the impact of digitalization on human resource development, talent management and workplace performance. The research findings indicate a positive impact of digital transformation on all variables. (Tripathi & Kushwaha (2017).

¹ Maditheti

It is strongly recommended for organizations to advance digitalization in HRM practices as it has become very important these days. A recent study by Fedorova et al. (2019) showed that digitizing HRM processes can eliminate many routine tasks, reduce the risk of human error, and empower experts to solve important problems, enabling them to use their knowledge and skills more effectively in solving business problems. Therefore, based on previous research, implementing digital HRM is important for organizations to improve performance and maintain relevance in the digital arena. (Iwu,2016)

HOW DOES DIGITAL HRM WORK?

Schwab (2016) in “The Fourth Industrial Revolution” explains how digital technologies have fundamentally changed the way organizations work, work styles, and how they operate. Therefore, digitalization is something that organizations should specifically incorporate into their HRM. For example, traditional recruitment and selection methods cannot reach a large geographic area of millions of people at once.

However, technology has made recruitment more efficient and effective by distributing information in a more engaging manner. For example, Unilever is one of the global companies that is fundamentally changing its recruitment process. The company is experimenting with social media, online games, and artificial intelligence to further digitize recruitment. (Banu, 2019).

Another example is related to employee training and development. Employees can access training program information from remote locations, participate in virtual classes, and evaluate progress through the system and portal. Furthermore, Gomes & Nawaz (2017) reported that HR information systems are useful in HR processes and act as a strategic tool for organizational development. (Anthony, 2014)

Also explained that this technology acts as an enabling tool for better performance through “cloud-based services, decision-making analytics, borderless teams and real-time talent management across the organization”. According to Larkin (2017) The developments in HR can be categorized into three main groups: “inside, outside and across”, for example, if the organization is considered “inside”, it means that it has an active digital office. The employer and employee communicate electronically and all information is disseminated in the form of video/audio or via mobile device.

Secondly, there is “outside”, which involves the employee or management level who is digitally active for the employee and management. Here they will use mobile devices to allow employees to do their work in a better and more efficient way.

Employees are more informed, engaged and alert in these systems because they can perform their tasks anywhere and anytime, thus bringing real-time feedback to management. The third is “Dressertaser” which means changes in the organization as a whole. Digitalization will bring innovation, collaboration and new strategies throughout the organization. Employees will become global workers by sharing their knowledge and ideas globally. (Saini ,2018)

ELEMENTS OF DIGITAL ORGANIZATIONAL MANAGEMENT

In the era of technology, human resource management has changed to match the competitive and dynamic world. Human resource management has transformed from traditional to digital. The following elements are needed to bring about a transformation in human resource management:

1. Digital Workforce

In the era of millennials, the current generations are considered digital workforce, they have internet-connected devices and web-based applications and services have always fascinated their daily lives. With

this workforce, the organization needs to be digital to interact with the digital employee (Sharon & Aggarwal, 2017). Therefore, digital human resource management is embedded with mobile apps, design thinking, video, behavioral economics and the use of system analytics. (Maditheti, 2017).

2. Digital Work and Task

The content of work is digitized by using technology in work activities and management functions. Organizations should integrate digital elements into work processes and transform traditional manual tasks into digital tasks (27). Organizations should also use digital tools and media to communicate with employees. Work and tasks in the organization should be organized digitally.

3. Digital Support Management

Digital Support Management involves planning, implementing, and using digital technologies to support human resource management activities, such as payroll processing, compensation, performance management, training and development, and so on. (Baiyere A and Salmela, 2013)

4. Updating HR Technology

There is a huge shift from traditional HR software to modern ones, such as cloud-based systems. Recently, HR applications have migrated to mobile devices and may shift to mobile platforms in the future. These applications enable analysis, measurement, and prediction of employee performance. Mobile applications facilitate work across borders and in remote geographies. (Maditheti, 2017)

Benefits of Digital Human Resource Management

The digital world is changing the way we live, work, and organize and conduct business. Digital human resource management can help leaders and employees in business move towards a digital mindset, a digital way of managing, organizing, and leading change. (DiRomualdo . et al. 2018).

It shows that digitalization is changing the way employees communicate and interact in the workplace, their expectations of their employer and job, where they work, and when they work.

Since the digital evolution affects organizations at different levels, there is a need to develop and adapt new knowledge and new ways of working (Bondarouk, & Ruël. 2009). Kiesler et al. (1984) argued in their research that technology mediates the relationship between “individuals and organizations, and subordinates and supervisors”.

Therefore, it has also reduced the distance in organizations so that employees can work from home and interact with others across geographical areas. Furthermore, (Heracleous, 2003) also emphasizes “the importance of investing in the development of new skills needed, especially if the change involves new technology and new roles”.

Therefore, digital technology is continuously changing the way organizations recruit, manage and support people. Furthermore, HRM creates the opportunity to transform the entire employee experience by changing HRM processes and systems.

Also, applied digital HRM as a concept Green HRM is considered to be a process that can contribute to an organization's environmental performance (Yusoff, et al. 2018). Some previous studies have shown that today's HR work involves streamlining and improving the employee experience by integrating digital technology.

Challenges for HR Professionals

In the era of digital transformation, organizations must adapt to changing HR practices. According to Sureshkrishna & Das (2019), HR managers have found that digitalization as an external pressure for change poses challenges for them in various ways, through the need for new HR competencies due to digitalization and flexible ways of working. Sureshkrishna & Das (2019) identify several prominent challenges as follows:

1. Understanding digitalization
2. Adapting to new roles
3. Agility
4. Exploring and developing digital competencies
5. Implementing organizational changes
6. Dealing with new forms of employment

DISCUSSION AND CONCLUSION

Digital HRM has become a part of today's business world. Organizations must move towards digital transformation to gain competitive advantage and relevance in the industry. This study provides an overview of digital resource management and the findings of this study are important for organizations in helping them effectively implement digital HRM and thereby improve their performance. Also, these findings can serve as a basis for researchers to conduct further research in the field of digital HRM and help other researchers identify relevant studies in the literature review phase of their work.

In addition, these findings can help researchers by providing a basis for understanding the impact of digital HRM on organizational performance. Nowadays, digital HRM is very vital and is of increasing concern to organizations.

It is recommended that researchers have a deeper study on how performance has changed from the past to the present, the extent of its impact on organizations, the role of the HR manager, and evaluation on implementation investment.

REFERENCES

- Larkin, J. (2017). HR Digital Disruption: The biggest wave of transformation in decades, *Strategic HR review*, 16(2): 55-59.
- Huselid, M. A.(1995). The impact of human resource management practices on turnover, productivity, and corporate financial performance. *Academy of management journal*, 38(3), 635-672.
- Bredin, K., & Söderlund, J.(2011). Human resource management in projectbased organizations: The HR quadriad framework. Springer.
- Kavanagh, M. J., Thite, M., & Johnson, R. D. (2009). The Future of HRIS. *Emerging Trends in HRM and IT*.
- Maditheti, N. N.(2017). A Comprehensive Literature Review of the Digital HR Research Filed. *organization*, 7(4).
- Saini S. (2018). Digital HRM and its Effective Implementation: An Empirical Study, *International Journal of Management Studies*, 2(7).

- Iwu, C. G.(2016). Effects of the use of electronic human resource management (E-HRM) within human resource management (HRM) functions at universities. *Acta Universitatis Danubius. Administratio*, 8(1).
- Tripathi, R., & Kushwaha, P. A(2017). study on Innovative Practices in Digital Human Resource Management. *Natioanl Seminar on Digital Transformation of Business in India: Opportunities and Challenges*. Dehradun: IMS Unison University.
- Fedorova, A., Zarubina, A., Pikulina, Y., Moskovskikh, A., Balandina, T., & Gafurova, T. (2019). Digitalization Of The Human Resource Management: Russian Companies Case. *International Conference on Education, Social Sciences and Humanities*, 1227- 1230.
- Schwab, K. (2016) The Fourth Industrial Revolution. *Harvard Business Review*, pp.1–5. Available at: <https://www.weforum.org/agenda/2016/01/the-fourth-industrialrevolution-what-it-means-and-how-torespond>
- Banu, S. R.(2019). HR Digital Transformation. *Journal of the Gujarat Research Society*, 21(13), 946-951,
- Nawaz, N., & Gomes, A. M.(2017) Human resource information system: a review of previous studies. *Journal of Management Research*, 9(3).
- Anthony, L.(2014) AntConc (Version 3.4. 3)[Computer Software]. Tokyo, Japan: Waseda University.
- Aggarwal, V. & Sharon S. D. (2017). Digital Human Resource Management. 11 (2), *Gyan Management*.
- DiRomualdo, A., El-Khoury, D., & Girimonte, F.(2018). HR in the digital age: how digital technology will change HR's organization structure, processes and roles. *Strategic HR Review*.
- Bondarouk, T. V., & Ruël, H. J. (2009). Electronic Human Resource Management: challenges in the digital era. *The International Journal of Human Resource Management*, 20(3), 505-514.
- Kiesler, S., Siegel, J., & McGuire, T. W. (1984). Social psychological aspects of computer-mediated communication. *American psychologist*, 39(10), 1123.
- Heracleous, L. (2003) *Strategy and organization: Realizing strategic management*. Cambridge University Press.
- Yusoff, Y. M., Nejati, M., Kee, D. M. H., & Amran, A.(2018). Linking green human resource management practices to environmental performance in hotel industry. *Global Business Review*, 0972150918779294.
- Das, S., & Sureshkrishna, G.(2019). Challenges of digitalisation for HR Professionals: An Exploratory Study. *International Journal Of Innovative Research In Technology*, 6 (1),
- Pantelidis I (2019) Digital human resource management. In: Boella MJ and Goss-Turner S (eds) *Human Resource Management in the Hospitality Industry: A Guide to Best Practice*. London: Routledge, n.p.
- Thite M (2019) Electronic/digital HRM: a primer. In: Thite M (ed.) *e-HRM: Digital Approaches, Directions & Applications*. New York: Routledge, pp. 1–21.
- Van Kruining I (2017) The dis-app-earance of HRM: impact of digitization on the HRM profession. In: Bondarouk T, Ruël H and Parry E (eds) *Electronic HRM in the Smart Era*. Bingley: Emerald, pp. 311–337

- Meijerink J, Boons M, Keegan A, et al. (2018) Call for Papers: Special issue of the International Journal of Human Resource Management: digitization and the transformation of human resource management. *The International Journal of Human Resource Management*. DOI: 10.1080/09585192.2018.1503845
- Bissola R and Imperatori B (2018) HRM 4.0: the digital transformation of the HR department. In: Cantoni F and Mangia G (eds) *Human Resource Management and Digitalization*. Abingdon: Routledge, pp. 51–69.
- Vardarlier P (2020) Digital transformation of human resource management: digital applications and strategic tools in HRM. In: Hacıoglu U (ed.) *Digital Business Strategies in Blockchain Ecosystems*. Cham: Springer, pp. 239–264
- Platanou K and Mäkelä K (2016) HR function at the crossroads of digital disruption. *Työn* 1:19–26.
- Bajer J (2017) Editorial: digital transformation of HR. *Strategic HR Review* 16(2): 53–54.
- Larkin J (2017) HR digital disruption: the biggest wave of transformation in decades. *Strategic HR Review* 16(2): 55–59.
- Baiyere A and Salmela H (2013) Disruptive innovation & information technology—charting a path. In: *Proceedings of the 24th Australasian conference on information systems (ACIS)*, Melbourne, VIC, Australia, 4–6 December 2013, pp. 1–11. Melbourne, VIC, Australia: RMIT University.
- Martini M and Cavenago D (2018) E-HRM configurations: an explorative analysis of types, drivers and outcomes of digital HRM. *Academy of Management Global Proceedings*. Epub ahead of print 22 May. DOI: 10.5465/amgblproc.surrey.2018.0001.abs.
- Suddaby E (2010) Editor's comments: construct clarity in theories of management and organization. *The Academy of Management Review* 35(3): 346–357.
- Bondarouk T, Parry E and Furtmueller E (2016) Electronic HRM: four decades of research on adoption and consequences. *The International Journal of Human Resource Management* 28(1): 1–34.
- Strohmeier S (2007) Research in e-HRM: review and implications. *Human Resource Management Review* 17(1): 19–37.

Received: 03.02.2025

Revised: 03.09.2025

Accepted: 03.10.2025

Published: 03.13.2025