

# HUMAN RESOURCE MANAGEMENT IN A DIGITAL ERA THROUGH THE LENS OF NEXT GENERATION HUMAN RESOURCE MANAGERS

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## ABSTRACT

*The digitalization of the Human Resource Management function in organizations is such that this function has the ability to leapfrog other support functions. This revolution is influencing the perception of the value-added by human resource management and at the same time ensuring that human resource management takes on a more significant role in organizations. The purpose of this exploratory research study is to investigate how undergraduate human resource management students perceive human resource management in a digital era (research question: how do human resource management undergraduates perceive human resource management in a digital era?). The contribution of this study is that it explores the perception of future generation human resource managers on the new roles of human resource management in the digitally transformed workforce they will form part of. A qualitative research methodology was adopted consisting of two, two-hour focus groups with 20 participants in each group. The main conclusion of this study is that human resource management undergraduates perceive human resource management in a digital era to be carrying out all the traditional roles associated with human resource management, however in a more effective, efficient, productive, and agile manner, as a result of technology literacy and competence in HR analytics. This study has a number of implications and recommendations for organizations and tertiary education providers.*

**Keywords:** Human resource management; Digitalization; HR analytics; Competencies; Tertiary education.

## INTRODUCTION

Business models are changing as a result of dynamic technological developments in the modern digital world, which in turn determine a radical change in the management of human resources. The entry and implementation of new technologies is resulting in a continuous change of the function of specialists in human resources management (Mihova & Ivanova, 2020). Human Resource Management activities and processes are being upgraded to the new technologies and human resource management is itself going through a radical transformation as a consequence of the digitalization of work processes (Fabbri & Scapolan, 2018).

The purpose of this exploratory research study is to investigate how undergraduate human resource management students perceive human resource management in a digital era (research question: how do human resource management undergraduates perceive human resource management in a digital era?). Digital transformation (Gimpel & Röglinger, 2015 as the managed adaptation to digitalization to ensure sustainable value creation for the organization) not only creates opportunities for undergraduates in human resource management, however also

presents challenges. For example, digital transformation is not only an opportunity for employee empowerment and the optimization of operations, digital transformation may also complicate the way in which employees are managed (van den Berg et al., 2020).

The contribution of this study is that it explores the perception of future generation human resource managers on human resource management in the digitally transformed workforce they will form part of. This study is not an objective study of the impact of digital transformation on human resource management but an exploration of the subjective perceptions of human resource management students of the new role that awaits them in a digitally transformed human resource management environment. This perspective to the study of human resource management in the digital era is under explored in research. With reference to the work by Salamzadeh (2020), this research study does not promise to propose a new concept or investigate a new relationship but to examine a previously researched topic in a new context.

## LITERATURE REVIEW

### Human Resource Management in the Digital Era

The role of human resource management in organizations has departed from a conservative role to a more creative and innovative one in implementing courageous initiatives such as competency-based recruitment, innovation compensation, outcome-oriented performance management, and human capital empowerment (Salamzadeh et al., 2019). The digitalization of the human resource management function is also a reflection of such a shift towards a more creative and innovative role.

As the Human Resource Management function becomes more digitalized it has the ability to leapfrog other support functions, according to Makridakis (2017). Advantages of digitalization for the world of human resource management include: in-depth analytics and an all-round higher level of performance (DiRomualdo et al., 2018); greater efficiencies in recruitment (Khahro et al., 2021), such as the replacing of manual curriculum vitae (CV) and automated screening that completes such tasks in seconds; transparency and greater access to previously closed data sets (Abolhassan, 2017); real-time monitoring of employees (Bondarouk & Brewster, 2016); automation of transactional tasks (Zeoli & Billeter, 2019); more HR analytics that 'push' reporting to line partners enabling them to see relevant data in real time and take action accordingly (Bersin, 2012). Baranes & Palas (2019) write how machine learning tools may create sophisticated, precise, fast and effective models for complex and computationally demanding decision processes, this will have an impact on HR analytics and the related human resource management prediction processes. This revolution is influencing the perception of the value-added by human resource management and at the same time ensures that human resource management takes on a more significant role in organisations (Kaji et al., 2019).

In accordance, Lumi (2020) in a summary of studies on the impact of digitalization on human resource management and referring to specific functions of human resource management writes that recruitment and selection has undergone the greatest impact by digitalization. Digitalization has increased the efficiency and effectiveness of the HRM function and nowadays human resource managers and candidates make use of a number of platforms such Facebook, LinkedIn, Skype (video conferencing) etc. for recruitment purposes.

Digitalization has also impacted the training and development function. Modern technology has revolutionized teaching techniques, such as the display of work-related videos, online courses, computerized learning methods, and reading through soft copies.

Andriushchenko et al. (2021) write about the unlimited informational resources organizations may access for training and development purposes, as a result of new technological tools. Unlimited informational resources are also paired with unlimited educational opportunities as organizations make use of online courses and blended learning, which is accessible to all regardless of where people live, their skills, and in accordance with their interests and capabilities. In a study on the introduction of digitalization of HR activities in the Bulgarian industrial enterprise, Muhova & Ivanova (2020) concluded that although most activities related to human resource management are in their initial stages of digitalization, where management is local, they are largely digitalized when it comes to training and development.

Digitalization has not only impacted the methods used for training and development however has also impacted the core objectives of training and development. Training and development professionals aim to challenge business leaders in adapting to the changing digital paradigm (Frey & Osborne, 2017). They also aim for digital competency development, including new emerging capabilities such as risk management, simplicity and, connection and innovation. Doing so will enhance companies' performance (Ulrich & Dulebohn, 2015).

### **The Human Resource Manager in the Digital Era**

Chytiri (2019) writes about the new role of the human resource manager in the digital era which, in summary, is to increase employee productivity and profitability, by linking effectively digital employees to automated jobs, the new digital forms, and organization structure. Chytiri (2019) explains that in order to fulfill successfully their new role HR managers need to act primarily as strategic positioners (this entails knowing the business context and external factors), as change agents, and as proponents of technology (knowing how to access, analyze, assess and share information and how to apply new technologies of information). In order to fulfill their new role human resource managers need to acquire digital skills and increase their digital dexterity.

The competencies of human resource managers need to be aligned with digital transformation. Human Resource Managers in the digital era require competencies such as are: business knowledge, HR expertise, change management and technology expertise (Fenech et al., 2019); analytical capabilities and data modeling skills (Lipton, 2017); risk-taking and tolerance for ambiguity (Lipton, 2017); being agile, people-oriented, innovative, connected, aligned and efficient (Betchoo, 2016); understanding the role of technology and the impact it has on people and the people function; knowing the latest technology offerings and understanding how they can improve productivity and help more collaborative work (Chartered Institute of Personnel Development, CIPD); the ability to recognize emerging technological trends that will impact business performance, and to champion technology usage throughout the company to drive adoption (Kelly & Rapp, 2016); the ability to drive innovation, optimize technology and contribute to sustainability of organizations (Subban, 2016b); the ability to leverage technology and technological tools to create high performing organizations (Ulrich & Brockbank, 2016); the use of social media to recruit, retain, develop and engage human capital (Ulrich & Brockbank, 2016).

On the analytical skills of HR Managers, Fabbri & Scapolan (2018) write about the must have HR analytics capabilities of HR Managers to improve decision quality and promote organizational change. This is because the digital workplace provides a large amount of

information and data regarding employees. HR analytics is described as the means for HR to create value and needs to be seen as an essential part of an interdepartmental business analytics

In the following section a detailed account is given of the methodology adopted in uncovering the perceptions of human resource management undergraduates on both the function of human resource management in a digitalized world, as well as the role of the human resource manager. A qualitative research methodology was chosen as the most fitting in answering the research question this study set out to answer.

## METHODOLOGY

A qualitative research methodology is the best methodology to uncover the richness of the thoughts and views of undergraduate students on the role of the human resource manager in a digital era. The specific qualitative method adopted in this study is of focus groups. This method of data collection was chosen as fitting with the context within which the study took place which is the tertiary education context.

Two two-hour focus groups were held with 20 participants in each group. These were led by the lead investigator. Participants were sampled using purposive sampling as they were third year undergraduate male and female (13 male and 27 female) students reading for a degree in human resource management and registered in two different human resource management courses (one course on labour law and another course on career development). Participants were given some background knowledge on the topic of digitalization and human resource management prior to receiving their consent.

Participation oral consent was formally sought after participants were also given a detailed explanation of what the study is about, what is expected of them if they accept to participate as well as how their privacy will be respected. It was explained that the focus groups were being recorded only for the purpose of the research study, that subsequent transcriptions would be prepared and analysed by the lead researcher alone, and that all reporting would be anonymous. The names of participants and the institution within which participants are reading for a degree would not be disclosed at any time.

Participants were also informed that in order to increase the trustworthiness of the data collected a process of respondent validation would follow whereby the lead investigator would check back with them to ensure that the reported data is in line with their views. Participants were in fact provided with summaries of their transcripts and asked whether they believed these to be a complete representation of their views or whether they would like to clarify or elaborate on their responses. Respondents' feedback on these issues was added to the data collection and analysis (Busetto et al., 2020).

A Semi-structured approach was adopted whereby the lead investigator had a set of pre-set questions to serve as guide whilst maintaining flexibility depending on the responses given by participants. The following are the pre-set questions that served as guide:

1. What are your views about the ways digitalization has impacted the human resource management function in organizations?
2. What are the advantages of the digital transformation of human resource management?
3. What are the challenges of the digital transformation of human resource management?

4. In what ways does digitalization change the role of the human resource management?
5. Do we need new human resource competencies in the digital era?.

Following the two audio recorded focus groups and the attainment of participant validation a content analysis of all transcribed material was carried out by the lead researcher. This approach was adopted *as it is not relevant for the quality or “objectivity” of qualitative research to separate those who recruited the study participants and collected and analysed the data. Experiences even show that it might be better to have the same person or team perform all of these tasks* (Busetto et al., 2020).

## RESULTS

The findings in this section are the result of a content analysis of the audio transcriptions of the two focus groups held with human resource management undergraduates. The lead investigator notes as well as notes held by participants were used as supplementary data to the audio transcriptions. The codes in table 1 were developed following an initial analysis of the data and subsequent analysis led to the recording of the frequency of such codes (Table 1).

<b>TABLE 1 THEMES, CODES AND FREQUENCIES RESULTING FROM CONTENT ANALYSIS</b>		
<b>Themes</b>	<b>Codes</b>	<b>Frequency</b>
Digitalization	Social Media	5
	Cloud Technology	6
	Mobile Technology	6
	HR Applications	7
Advantages	Effectiveness	10
	Efficiency	10
	Productivity	8
	Time	13
	Less costly	8
	Knowledge Management	7
	Agility	9
	Employee Surveillance	9
Challenges	Resistance	10
	Expense	6
	Lack of Strategy	10
	Shift in organisational culture	6
	Data security	9
	Need for training	7
Role of HR Manager	Automation	7
	Recruitment and Selection	10
	Talent Management	9
	HR Analytics	7
HR Management Competencies	Data Analytics	9
	Technology literacy	11
	Robotics	6

The following patterns and conclusion were drawn once coding was completed (the text in italic is direct quotations from participants):

### **The Impact of Digitalization on Human Resource Management**

Participants agree that digitalization (referring to the use of social media, cloud technology, mobile technology and HR mobile applications) is having a great and positive impact on human resource management in organizations (I believe that digitalization has positively affected the development of HRM). Participants spoke about the way digitalization eased the human resource management function and processes (it has become easier and faster; allows hr in the organization to improve its processes). They add that as a result employees in the human management resource departments are more effective and efficient (nowadays organizations have realized that effective recruiting cannot be done without the use of IT).

### **Advantages of the Digital Transformation of Human Resource Management**

Participants discussed the advantages of human resource management practiced in the digital era using words such as efficiency, effectiveness, productivity (allowing you to focus on more productive and important work), as well as referring to the better use of time and money. On the management of knowledge, participants noted that knowledge, as a result of the digital transformation of human resource management, is more readily and easily available (easy to access and acquire the knowledge), making it more possible to take informed human resource management decisions (such as by forecasting the needs of a company in terms of resources and capabilities). The pace of work within the human resource management department has also changed as participants make reference to the word agility.

Greater employee surveillance (supervisory feedback) and monitoring is a controversial theme. Participants took a stand on this argument adding it to the advantages of the digital transformation of human resource management.

### **Challenges of the Digital Transformation of Human Resource Management**

Participants in both focus groups took a positive approach towards digitalization stating that challenges are more a reflection of not having a clear strategy as an organization, as opposed to challenges that are strictly related to digitalization (lack of strategy for digital transformation; lack of a defined strategy).

Employee resistance, defined as the unwillingness to adapt to the changes that digital transformation is bringing about in the world of human resource management, was a common theme in the discussion on challenges (not all employees will adapt to the new system). Some participants referred to the need for a change in organizational culture. Another challenge that was mentioned was the time needed for employees to adapt to the change and to learn new skills (some employees may not know how to use the technology and may need training).

A debate was held on digitalization and its impact on the financial bottom line for the organization. Participants discussed the initial cost of digitalization for the Human Resource Management department (lack of budget to enable digitalization), however also mentioned the long term financial advantage.

Participants are concerned about data security and the related challenges that the digitalization of the human resource management function may bring with it.

### **The Changing Role of the Human Resource Management**

Not all participants believe that the role human resource management will change as some claim that the tasks and role will not change whilst the methods will (it will not change the role of the HR Manager, but will add different ways to do the same task; it makes the HR practices more efficient). Automation (automating time consuming and manual processes) will change the way the human resource function is carried out, in giving examples participants mentioned the greater automation in recruitment and selection, performance management (collecting regular employee reviews; monitoring performance, collecting supervisory feedback and facilitating regular employee reviews), and talent management (use data and technology to make informed talent decisions). International recruitment and selection is also easier in a digital era, for example with the possibility of interviewing people remotely (people can attend an interview in whichever country they find themselves in). Participants claim that digitalization will improve talent business decisions as a result of data analytics. The human resource manager is going to have more data available and therefore will be better equipped at making decisions (use data and technology to make better informed talent business decisions).

### **New Human Resource Competencies in the Digital Era**

Participants mentioned the need for expertise in HR Analytics as more data is being made available by the use of technology. They also mentioned the need for greater technology literacy as the basis for HR managers to be able to access, manage, integrate, evaluate, create and communicate information. Participants also introduced the subject of artificial intelligence in their discussions referring mainly to robotics and the need to learn to work with robotics.

## **DISCUSSION**

Student perceptions of human resource management in a digital era have fast evolved. Students in tertiary education have a clear and positive perception of human resource management in the digital era as it relies more on social media, mobile and cloud technology, and HR Applications. The perception is of a more effective, efficient, productive, and agile human resource management that may be challenged by a lack of organisational strategy and change management, employee resistance, and an organizational culture that has not made the digital shift. The HR Manager of the 21<sup>st</sup> century in the digital era is perceived by human resource management undergraduates as more competent in HR analytics and technology literacy in coping with greater automation, particularly, however not exclusively, in the areas of recruitment and selection, performance management, and talent management.

Research findings in this study are in line with previous research that stated that the digital revolution is influencing the perception of the value-added by human resource management (Kaji et al., 2019). Students in higher education reflect back what previous studies have written with regards to the advantages of digitalization, particularly the in-depth analytics (Bersin, 2012; DiRomualdo et al., 2018; Baranes & Palas, 2019); greater efficiencies in recruitment and selection; greater access to previously closed data sets (Abolhassan, 2017); real-

time monitoring of employees (Bondarouk & Brewster, 2016); and automation of transactional tasks (Zeoli & Billeter, 2019).

Current findings also emphasize the perceived revolution in the field of recruitment and selection as a result of digitalization. This finding is in line with the findings by Lumi (2020) who writes that the recruitment and selection processes have undergone the greatest impact by digitalization. Digitalization has increased the efficiency and effectiveness of this HRM function and nowadays human resource managers and candidates make use of a number of platforms such as Facebook, LinkedIn, Skype (video conferencing) etc. for recruitment purposes. Platforms also referred to by participants in this study using the generic term of social media.

Research findings are also in line with the previous work by Chytiri (2019) who stated that in order to fulfil their new role human resource managers need to acquire digital skills and increase their digital dexterity. Undergraduate human resource management students, similarly to authors in previous literature emphasize the competencies of technology expertise (Fenech et al., 2019); analytical capabilities (Lipton, 2017), being agile (Betchoo, 2016). Participants also agree with Fabbri & Scapolan (2018) about the must have analytical skills of HR Managers to improve decision quality and promote organizational change. In the section that follows implications of the above results as well as recommendations based on these results are shared.

The main conclusion of this study is that human resource management undergraduates perceive human resource management in a digital era to be carrying out all the traditional roles associated with human resource management, however in a more effective, efficient, productive, and agile manner, as a result of technology literacy and competence in HR analytics. The shift in human resource management needs to be supported by the organisational strategy, change management, and culture. All implications of this study are of a practical nature and not of a theoretical one as they do not confirm or challenge any theory in human resource management.

Implications of these findings are that students in human resource management undergraduate programmes need to be equipped to work in the digital era and should acquire competencies in data analytics and technology literacy. Implications for educators and curriculum developers are to focus on the changing human resource functions, as such functions rely more on the use of technology.

Implications for organizations are to take advantage of the more efficient, productive, effective and agile human resource management and to give it a more strategic role within the organization. Automation is freeing time for people working in human resource management allowing them more time for the strategic business decisions. Investing in social media, mobile and cloud technology brings return on investments for the organization. Further implications of this study are that young talented fresh graduates do not want to join organizations that resist the digital transformation, that do not have a clear digitalization strategy, whose culture is not aligned with such transformation, and who do not invest in training that fits the digital era. This will mean that such organizations will lose out on talent.

A recommendation for tertiary education institutions offering major programmes in HR, is to include in their curricula knowledge on the dynamic technological developments that are radically changing the management of human resources in organizations, as well as knowledge on how human resource management processes are being transformed accordingly. A recommendation from students in tertiary education participating in this study to organizations is to develop a human resource management digitalization strategy to embrace the digital revolution, bring about transformation in human resource management, and engage employees in the process.



A recommendation for researchers is to study the advancements in artificial intelligence and their impact on human resource management for future generation human resource managers. Artificial Intelligence has the potential to create intelligent machines that can solve problems similarly to humans (Chikhaoui & Mehar, 2020). This will surely lead to further transformations in the field of human resource management as we know it today.

## CONCLUSION

Finally, in analyzing the results of this study attention needs to be given to potential limitations. Limitations encountered in carrying out this study are mainly tied to the qualitative nature of the study. Whilst a qualitative methodology was selected as the most of apt in creating a discussion on perceptions of students it was noted that students have a tendency to follow a group trail of thought that may influence their interventions and participation. For this reason it is recommended that in future research a mixed method approach may be adopted that combines both an individual survey and a focus group that follows the survey to add clarity to survey replies given by participants. The number of participants in each group may also be considered as a limitation due to the fact that such large focus groups may not allow all participants to participate as much as they would in smaller groups. In addition, the contributions of participants may have been influenced by how much knowledge they have or do not have on digitalization of a workforce they have not yet experienced first-hand.

## REFERENCES

- Abolhassan, F. (2017). Security: The real challenge for digitalization. In *Cyber Security. Simply. Make it Happen*. (pp. 1-11). Springer, Cham.
- Andriushchenko, K., Khaletska, A., Ushenko, N., Zholnerchyk, H., Ivanets, I., Petrychuk, S., & Uliganets, S. (2021). Education process digitalization and its impact on human capital of an enterprise.
- Baranes, A., & Palas, R. (2019). Earning movement prediction using machine learning-support vector machines (SVM). *Journal of Management Information and Decision Sciences*, 22(2), 36-53.
- Bersin, J. (2012). *New research: BigData in HR as huge opportunity*. Available at: <https://joshbersin.com/2012/04/new-research-bigdata-in-hr-as-huge-opportunity>. Accessed 1 September 2021.
- Betchoo, N. K. (2016, August). Digital transformation and its impact on human resource management: A case analysis of two unrelated businesses in the Mauritian public service. In *2016 IEEE International Conference on Emerging Technologies and Innovative Business Practices for the Transformation of Societies (EmergiTech)* (pp. 147-152). IEEE.
- Betchoo, N. K. (2016, August). Digital transformation and its impact on human resource management: A case analysis of two unrelated businesses in the Mauritian public service. In *2016 IEEE International Conference on Emerging Technologies and Innovative Business Practices for the Transformation of Societies (EmergiTech)* (pp. 147-152). IEEE.
- Busetto, L., Wick, W., & Gumbinger, C. (2020). How to use and assess qualitative research methods. *Neurological Research and practice*, 2, 1-10.
- Chikhaoui, E., & Mehar, S. (2020). Artificial intelligence (AI) collides with patent law. *Journal of Legal, Ethical and Regulatory Issues*, 23(2), 1-10.
- Chytiri, A. P. (2019). Human Resource Managers'role In The Digital Era.
- 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*.
- Fabbri, T., & Scapolan, A.C. (2018). Digitalization and HR Analytics: A Big Game for HR Managers. In Cantoni, Franca, and Gianluigi Mangia. *Human Resource Management and Digitalization* 243-254.
- Fenech, R., Baguant, P., & Ivanov, D. (2019). The changing role of human resource management in an era of digital transformation. *Journal of Management Information and Decision Sciences*, 22(2), 1-10.

- Frey, C. B., & Osborne, M. A. (2017). The future of employment: How susceptible are jobs to computerisation?. *Technological forecasting and social change*, 114, 254-280.
- Gimpel, H., & Röglinger, M. (2015). Digital transformation: changes and chances—insights based on an empirical study.
- Kaji, J., Hurley, B., Gangopadhyay, N., Bhat, R., & Khan, A. (2019). Leading the social enterprise: Reinvent with a human focus.
- Kelly, C., & Rapp, K. (2016). The HR function in 2021: Models and competencies [Video file]. Retrieved from <http://www.cornell.edu/video/hr-function-2021-models-competencies>.
- Khahro, S. H., Hassan, S., Zainun, N. Y. B., & Javed, Y. (2021). Digital Transformation and E-Commerce in Construction Industry: A Prospective Assessment. *Academy of Strategic Management Journal*, 20(1), 1-8.
- Lipton, A. (2017). The internet of people delivers new ways of learning. *People & Strategy*, 40(3), 49-52.
- Mihova, T. B., & Ivanova, I. M. (2020, June). Digitalization of HR activities in industrial enterprises. In *IOP Conference Series: Materials Science and Engineering* (Vol. 878, No. 1, p. 012069). IOP Publishing.
- Salamzadeh, A. (2020). What Constitutes A Theoretical Contribution?. *Journal of Organizational Culture, Communications and Conflict*, 24(1), 1-2.
- Salamzadeh, A., Tajpour, M., & Hosseini, E. (2019). Corporate entrepreneurship in University of Tehran: does human resources management matter?. *International journal of knowledge-based development*, 10(3), 276-292.
- Subban, L. (2016b). SABPP fact sheet: Innovation in HR. *South African Board of People Practices*, 6(1), 1–23.
- Ulrich, D., & Dulebohn, J. H. (2015). Are we there yet? What's next for HR?. *Human Resource Management Review*, 25(2), 188-204.
- van den Berg, M. J., Stander, M. W., & van der Vaart, L. (2020). An exploration of key human resource practitioner competencies in a digitally transformed organisation. *SA Journal of Human Resource Management*, 18, 13.
- Vickers, N. J. (2017). Animal communication: when i'm calling you, will you answer too?. *Current biology*, 27(14), R713-R715.
- Zeoli, M.L., & Billeter, K. (2019). Transforming HR to be more digital (and more human). *Workforce Solutions Review*, 10 (1), 4–7.