INTRODUCTION

In the current business environment, where organizations compete based on talents and skills, employees are more valuable than ever (Huselid, 1995). It is rather simple to replicate or even improve upon the products and services of an organization; however, this does not hold true for its employees’ loyalty, knowledge, skills, and engagement (Gričnik and Šarotar Žižek, 2023). Therefore, one of the main aims of human resource management (HRM) in every organization is to attract, motivate, and retain talented employees (Katz and Kahn, 1978).

On a daily basis, modern organizations face significant changes, primarily due to ongoing advances in technology, workforce diversity, and innovation. As the new generation of talents (Generation Z) is considerably more demanding than preceding generations, attracting and retaining new age employees is becoming an increasingly difficult task (Racolţa-Paina et al., 2021).

Undoubtedly, modern technology is revolutionizing HRM practices (Kavanagh and Johnson, 2018) and changing the way how organisations develop HR strategies, and select, recruit, and train employees (Stanley & Aggarwal, 2019, Barboza, 2018, Parry and Tyson, 2008; Strohmeier, 2007). Artificial intelligence (AI) also has great potential for the HRM field; the potential to eliminate repetitive, monotonous tasks, the potential to generate new ideas; the potential to accelerate decision making, etc. Nevertheless, these potentials merely touch the surface of how modern technologies may help organizations in attracting and retaining new age employees (Trisca, 2024).

The study has potential limitations. The main limitation of our study is that we solely focused on the review of the existing literature and did not conduct any empirical research. This means that we relied on the existing scientific data, findings, and analysis of other researchers, which may limit the depth of our findings. There were no other limitations.

The main aim of this paper is to explore whether modern achievements such as artificial intelligence and electronic human resource management can help organizations to overcome problems of attracting and retaining of new age talent. This is conceptual paper based on systematic exploration of literature in three subjects, which are talent management, digitalization of HRM and changing workforce. Research results indicate that digitalisation of HRM has potential to change primary model of recruiting and retaining talented young professionals. Also, results show which digital tools can improve and adapt process of attracting and retaining the new generation of talents. This paper integrates research from three fields and gives specific contribution to the human resource management literature.

Keywords talent management, artificial intelligence, HRM digitalization, generation Z

TALENT MANAGEMENT IN THE AGE OF DIGITAL TRANSFORMATION AND CHANGES IN THE WORKFORCE CHARACTERISTICS

Abstract

In contemporary business environment many organizations are faced with HRM challenges, including the problem of attracting and retaining talented individuals. Some of the more significant reasons of this issue are related to the liberalization of the labour market in global frameworks and changes in the characteristics of the workforce. The upcoming generation of professionals has a different attitude towards work. They want greater autonomy, flexibility, the possibility of career advancement and identification with the company’s values and culture. For young professionals, technology is an integral part of their lives. Main purpose of this paper is to explore whether modern achievements such as artificial intelligence and electronic human resource management can help organizations to overcome problems of attracting and retaining of new age talent. This is conceptual paper based on systematic exploration of literature in three subjects, which are talent management, digitalization of HRM and changing workforce. Research results indicate that digitalisation of HRM has potential to change primary model of recruiting and retaining talented young professionals. Also, results show which digital tools can improve and adapt process of attracting and retaining the new generation of talents. This paper integrates research from three fields and gives specific contribution to the human resource management literature.

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The main aim of this paper is to explore whether modern achievements such as AI in attracting, selecting, recruiting, and retaining the new generation of talent. In light of this, the paper is structured in four sections. The first section, following the introduction, provides the overview of the digitalization of HRM. The second part evaluates characteristics of the changing workforce, with the focus on Generation Z. Subsequently, process of talent management is presented. Finally, it was discussed the use of AI in talent management process. By integrating these research fields, this paper contributes and fills the gap in the existing literature in the field of HRM.

Our qualitative research addressed the following research question: How can organizations use modern technologies to improve the talent management practices of Generation Z members? For researching this problem, a qualitative approach was used, with
1. DIGITALIZATION OF HRM

Early unsophisticated systems for supporting individual administrative activities appeared as early as the time of personnel management. During the nineties of the last century, parallel with the transformation of personnel management into human resources management, there was also a transformation of early support systems into more complex integrated enterprise resource management systems. With the further development of technology, human resource management systems also have been modified and continuously improved. One direction of development is increasing the degree of system utilization by managers (Management Self Service - MSS) and employees (Employee Self Service - ESS). Today, it is clear that digital technologies enable faster and optimized performance of HRM tasks and activities, resulting in enhanced efficiency and optimization (Mosca, 2020; Gorenšek, 2022). Digitalization of HRM offers numerous advantages, including (Mosca, 2020; Crawshaw et al., 2020):

- cost savings by automating processes and systems,
- enhanced productivity,
- improved HR efficiency,
- greater employee and business flexibility,
- time savings,
- improved GR service delivery and end-user experience,
- reduced paperwork,
- improved employee cooperation,
- improved market responsiveness,
- enhanced communication quality, and
- employees get more informed.

Some authors (Marler & Parry, 2015; Stone et al., 2015) argue that the development of information technologies has significantly influenced the increasing strategic role of human resource management in organizations. This claim arises from the fact that the automation of administrative tasks leaves more space for activities that contribute to enhancing organizational effectiveness and make the HR department a strategic partner within the organization. On the other hand, with the change in the role of HR management in the organization, specific software solutions have evolved from administrative to functional to strategic focus. Today, there are different software solutions on the market, from integral to stand-alone HRM information systems. It can be said that the digitalization of HRM encompasses both administrative functions, such as payroll processing, and keeping records of working hours as well as management functions, including talent development, employee care, and rewards.

The next phase of HRM digitization is characterized by advanced analytics and artificial intelligence, which are becoming integral parts of human resources information systems. AI is not static; it is constantly evolving and adapting by gaining information and performing tasks through the use of sensing, cognition, and actions, using a variety of tools and technologies that are currently available (Crawshaw et al., 2020). However, implementing artificial intelligence into existing human resource management systems is more than just advanced technology. The emergence of machine intelligence that imitates cognitive functions, i.e. the abilities possessed by humans, requires a transition from a traditional to an intelligent approach in human resource management activities (Cormaković, Dražeta & Njeguš, 2022). Essentially, there are four levels of use of artificial intelligence in human resource management support systems.

The first level of AI application can be termed as intelligent automation, involving the implementation of artificial intelligence into traditional HR systems to automate them. For example Intelligent Robotic Process Automation (RPA) bots can be used for this purpose, automating tasks and processes while simultaneously identifying patterns in repetitive tasks, learning from previous activities to improve processes, providing analytics, and enabling decision-making (Chugh, Macht & Hossan, 2022; Herm et al., 2022; Mohamed et al., 2022). Given the repetitive nature of many tasks in the field of human resource management, the possibilities for applying intelligent RPA bots are manifold. For example, in the hiring process, they can be used for pre-selection purposes, such as filtering incoming candidates, including reviewing and analysing resumes and other documentation. They can also be applied to onboard new hires, manage employee data, process payroll, track attendance and employee performance, and for numerous other purposes. Therefore, such applications automate and enhance everyday operations and can have a wide range of users, from managers to employees.

The second level of AI application refers to smart analytics systems primarily designed for managers or decision-makers at various hierarchical levels within the organization. These systems involve the integration of artificial intelligence with traditional decision support systems such as Business Intelligence Systems, Analytics Information Systems, or On-Line Analytical Processing Systems. Nowadays, such systems are enriched with machine learning algorithms, enabling them to achieve precision, tackle complex tasks, and make data-driven decisions. Smart analytics systems often feature user-friendly interfaces and enable the visualization of complex data. In human resource management, they are used for workforce analytics, predicting employee turnover, hiring analytics, and similar purposes (Kakulapati, 2020, Hamoud et al, 2020, Huseild, 2018).
The third level refers to Big Data Systems, which have the ability to process data in various formats (image, voice, video, text, etc.) in real time, in contrast to traditional technologies that are primarily adapted to work with structured data. In practice, this means that such systems can analyse large amounts of unstructured data from annual surveys, web profiles, chats on social networks and other information available on the Internet (Cormaković, Dražeta & Njeguš, 2022). In human resources management, big data analytics is used for recruiting talent, determining priority recruitment channels, monitoring and assessing candidates, developing adequate strategies for motivating and retaining employees, and numerous other management aspects.

The fourth level consists of intelligent systems with human-like capabilities, which are still in development. Their evolution is moving towards the ability of the system to apply its intelligence to solve complex problems similar to humans. This means that these systems, instead of merely imitating or simulating human cognition, will be able to recognize emotions, beliefs, and mental processes. Although the use of intelligent systems with human-like capabilities in human resource management may seem like a distant future, it cannot be denied that the evolution of human resource information systems continues to progress in tandem with the development of organizational needs. In the future, greater integration of traditional support systems with new technologies based on artificial intelligence can be expected.

Generally, the level of application of modern technologies in companies primarily depends on the actual needs of employees, the readiness and feasibility of introducing new technologies, and the demands for achieving better performance and competitiveness. However, regardless of the above, there are multiple reasons in favour of implementing a specific form of information system to support human resource management. First of all, with the increase in the size of the organization, HRM tasks become extensive and inefficient, and managing, using, and controlling human resource information becomes increasingly challenging. In such circumstances, the implementation of an information system represents a viable solution, enabling the human resource unit to process data more efficiently, automate certain process activities, conduct various analyses, generate employee reports, and make accurate, precise, and reliable decisions. Also, the upcoming generation of the workforce that was born, educated and formed in the era of digital technologies has specific expectations from employers regarding the application of modern technologies in the workplace.

2. CHANGING WORKFORCE

In contemporary business conditions, the workforce is characterized by significant diversification caused by numerous primary and secondary factors. Primary factors of workforce diversification may include gender, age, nationality, ethnic heritage, sexual orientation, and similar characteristics. These factors have a significant impact on our early socialization and throughout our life stages. Secondary factors of diversification influence the individual differences we accept, reject, and change throughout life. Some of these secondary factors include education, religious affiliation, work experience, marital status, and similar aspects. Workforce diversification is also influenced by factors such as cultural values, social norms, population migrations, and other socio-economic factors. In addition to the above, generational diversity of the workforce is also present on the labour market. Each generation brings changes in the general characteristics of the workforce, which are reflected in different values, different expectations and approaches to business, different technological skills and methods of communication.

Currently, there are four different workforce generations: Baby Boomers (individuals born 1946-1964), Generation X (individuals born 1965-1979), Generation Y or Millennials (individuals born 1980-1999), and Generation Z (individuals born 2000-2010). The current workforce is experiencing significant changes, including the retirement of Baby Boomers from their professional careers and their replacement by Generation Z (Kapoor and Solomon, 2011). To address the challenges caused by generational differences, HRM professionals need to find new ways of satisfying new age employees while aiming not to neglect older employees, and acquire the skills necessary to manage multigenerational teams (Benitez-Marquez, 2022).

Generation Z is history’s most technologically advanced, materially endowed, globally linked, and formally educated generation (McCrindle, 2014). They are also known as materialists, pragmatists, and realists (Lanier, 2017). The average Generation Z individual, or digital native as commonly referred to, can be defined as the first generation to “live and breathe” technology due to their exposure to a globally connected world via the internet (Rothman, 2016). Consequently, information technology significantly determines their primary model of interpersonal communication, work, and life values. For Generation Z virtual socializing without personal contact is common. As a result, there is an observed decrease in verbal communication skills, although they are highly skilled in communicating in the virtual world. Also, they seek employers whose working conditions align with their values and lifestyle (Zolak Poljašević & Šarotar Žižek, 2023; Gabrielova & Bucho, 2021; Dolot, 2018; Jorgulescu, 2016).

Compared to previous generations, Generation Z individuals (Rothman, 2016; Randstand, Canada, 2014; Gaidhani, 2019):

- are tech savvy and want to use technology that is easy to use and will assist them in solving their problems in both their work and personal
- are attracted by work flexibility and creativity,
- value honesty in integrity over anything else, and want solely to work for a leader with these characteristics,
- expect their supervisors to give them regular feedback,
- aim to work on projects they care about or they feel connected with,
are driven by an entrepreneurial mind-set,
• favour work environment that promotes learning, professional development opportunities, and mentoring,
• desire to achieve work-life balance,
• enjoy open dialogue,
• value transparency,
• prefer face-to-face communication,
• want to be listened to and valued for their ideas and opinions, and
• expect their organization to be socially responsible.

Part of Generation Z is already employed, while others are currently entering the workforce or will do so in a few years. Given that members of Generation Z significantly differ from other generations, it is a major challenge for human resources managers to integrate this generation into the existing organisational systems (Zolak Poljašević & Šarotar Žižek, 2023). The integration of Generation Z into the workforce is also difficult due to the challenges caused by the pandemic, including its economic downturn and its associated social and labour implications (Magano et al., 2020). Nevertheless, these challenges haven’t stopped Generation Z from having ambitious career goals and high expectations regarding their career development (Snieska et al., 2020; Barhate and Dirani, 2021).

It can be argued that Generation Z is more inclined than previous generations to change jobs frequently, and if they do not like something, they plan on doing so immediately. This is connected to the fact that they are motivated by opportunities for skill development and finding their dream job (Magano et al., 2020; Csiszárik-Kocsir and Garia-Fodor, 2018). Hence, HRM professionals are confronted with the dual challenge of not only attracting Generation individuals Z but also ensuring that they have what they desire in to stay in the organization (Magano et al., 2020). Therefore, one of the most common ways organizations try to address the demands of Generation Z is by fostering a friendly workplace, staying up-to-date with the latest technologies, establishing ambassador programs and internships, providing benefits, and engaging in corporate social responsibility activities (Bielen and Kubiczek, 2020).

3. TALENT MANAGEMENT

Talent management (TM) encompasses all organizational efforts taken to attract, develop, and retain the best employees (Scullion et al., 2010). These include processes of recruitment, selection, motivation, recognizing successful work, rewarding employees, mentoring, performance management, and career development. While many other types of competitive advantage only offer short-term benefits, TM practices can be viewed as a tool that provides a sustainable competitive advantage via establishing development, work culture, competence, arrangement processes, and engagement that are aligned with the organization’s goals (Heinen and O’Neill, 2004; Paradise, 2011).

Win in the war for talents should be one of the main priorities of any organization. With that in mind, to attract and retain the right people, it is vital to develop and continuously improve an employee value proposition. This refers to senior management’s response to why a smart, motivated, and ambitious person would choose to work with their organization instead of a competing team (Chambers et al., 1998).

There is no single definition of TM, and the terms “talent strategy”, “HR planning”, “succession management”, and “talent management” are often used synonymously. “There are also many definitions of talent management that refer to key concepts such as attracting, retaining, developing, and deploying talent” (Montero Guerra, Danvila-del-Valle & Méndez-Suárez, 2023). Hence, Lewis and Heckman (2006) propose the following definitions of TM:

- TM ensures the appropriate individual is assigned to the appropriate position at the appropriate time (Jackson and Schuler, 1990).
- TM is a methodical and deliberate organization’s endeavor to promote individual development and maintain leadership continuity in key positions (Rothwell, 1994).
- TM is managing the flow, demand, and supply of talent via the human capital engine (Pascal, 2004).

Although all three of these terms pertain to employee management, their apparent similarity overlooks the fact that the first definition refers to an outcome, the second to a process, and the third to a particular decision (Lewis and Heckman, 2006).

TM is crucial for organizations as it impacts their development and enhances their productivity. From an individual’s perspective, it holds importance mainly due to its impact on their professional, work, and personal development. It is based on the analysis of an individual’s potential, abilities, knowledge, and skills. While every person is notably efficient in a certain area and shows great potential for further development within it, in practice, TM mainly involves solely the development of highly talented and promising individuals in important positions within an organization (Collings et al., 2015). Usually, talent management process is consisting of several steps, including: workforce planning, talent recruitment, talent retention, talent development, performance management and succession planning.
Workforce planning is the process by which HRM ensures that the organization has a well-defined goal concerning its manpower, by predicting who will be participants in the organization’s future success (Hay Group, 2005). Despite its importance, workforce planning remains an undeveloped process in many organizations. However, organizations should prioritize workforce planning and prepare for an uncertain future that has the potential to significantly impact their plans and goals (Shukla, 2009).

The process of attracting talent includes four main activities: brand development, attracting potential talent to the organization, and selection and recruitment (Tarique and Schuler, 2010). The organization must perform the following activities to attract talent: transformation of the strategy to acquire the most qualified candidates; implementation of talent development initiatives; managerial acceptance of talent orientation activities; development of an employee value plan; and evaluation and differentiation of employee performance (Michaels et al., 2001). When trying to attract talented individuals, it is important to ensure that their behaviour aligns with the behavioural expectations of the workplace. This includes identifying a potential employee’s values, goals, and desires, and determining appropriate ways to motivate and reward them (Sušnik, 2016).

When employing someone new, organizations can sometimes focus too much on the process itself, instead of focusing on the acceptance of the individual into the organisation. Therefore, establishing a strong connection between the individual and the organizational culture is crucial for the success of the entire talent lifecycle. Namely, there is a risk of losing the newly hired talent right away, either physically or mentally. Additionally, the psychological contract established between the organization and the talent during important stages of the employment relationship (recruiting, hiring, performance evaluation, and when the organization communicates its plans) is crucial for the retention of talent in organizations. Its significance lies in filling the gaps that are not covered by the traditional formal contract (Sušnik, 2018).

Succession planning refers to the practice of ensuring an adequate “supply” of potential successors for both present and future important positions within the organization (Dessler, 2003). This strategic plan aims to ensure the availability of prospective internal employees to replace departing talented staff, thereby reducing the potential negative impacts of the change (Huang, 2001).

4. THE IMPACT OF DIGITAL TRANSFORMATION ON TALENT MANAGEMENT

Modern technologies are highly effective at providing contextual information to data, helping HRM professionals to make well-informed decisions regarding all aspects of their talent management strategy (Trisca, 2024). In light of this, some ways in which AI can help in talent management are:

- Talent recruitment and acquisition: By examining resumes and job applications, AI-powered algorithms can identify the most suitable candidates according to predetermined criteria. Furthermore, by analysing candidate data, AI can predict which individuals have the highest chance of succeeding in a specific position, thereby improving the recruitment process (Murugesan et al., 2023). Besides that, AI-driven recruitment systems use many techniques to reduce bias. These include using predictive analytics to identify the most suitable candidates, using virtual AI-driven interview platforms, and using intelligent shortlisting methods to identify suitable candidates. The technology uses predetermined selection criteria during the screening process, ensuring equal opportunities for all applicants. By eliminating prejudices based on race, gender, or sexual orientation, algorithms enable HR professionals to accurately identify suitable candidates for open positions. AI enables the connection between people across different locations, cultures, and time zones, enabling HRM professionals to reach out to a wider and more varied group of potential prospects (Trisca, 2024). Furthermore, AI systems automatically schedule meetings and interviews, provide immediate feedback, and respond to relevant questions from applicants (Maity, 2019).
- Onboarding: As new hires learn about their co-workers, job requirements, and business culture, onboarding is difficult. AI can automate much of the admin for day one and the coming weeks. For example, pre-boarding Chabot can respond to frequently asked questions and assist new employees in completing the initial set of forms (Trisca, 2024).
- Talent retention and engagement: AI enhances employee engagement and retention initiatives by automating processes such as performing staff surveys, pulse checks, and exit interviews. Through natural language processing (NLP), AI may examine unstructured data from these exchanges to: i) recognize trends in engagement and proactively resolve issues, ii) assess the emotions of employees, iii) evaluate patterns for predicting possible turnover, and iv) measure employee engagement (Trisca, 2024).
- Talent development: The use of AI in learning and development assures that employees consistently gain the necessary skills and knowledge to succeed in their jobs. Machine learning is crucial in enhancing this process by carrying out individual training needs evaluation, creating training materials based on specific employee growth areas, and providing
competency-based coaching. This makes the process more personalized, efficient, and successful (Trisca, 2024).

- Performance management: AI helps this process by analyzing a continuous stream of employee data to identify performance trends and patterns, summarizing feedback from multiple sources emphasizing the most significant development areas, and providing predictive insights to assist managers in making more informed decisions regarding promotions, compensation, and career development opportunities (Trisca, 2024). All of this can be used to develop individualized performance improvement plans for each employee, thereby enhancing productivity and overall performance (Oswald, 2010).

- Succession planning: While certain talent acquisition teams may need to seek external candidates for leadership roles, it is more cost-effective to focus on succession planning within the internal organizational structure. AI’s data-driven insights assist HRM professionals in identifying high-potential personnel who are ideally suited for leadership positions. By analyzing employee performance data and career advancement, the technology identifies individuals who exhibit exceptional leadership qualities (Trisca, 2024).

- Skill gap analysis: The skill gap analysis enables organizations to identify crucial gaps that may need immediate attention and develop focused training programs or recruit external individuals with specific capabilities (Trisca, 2024). Furthermore, AI-driven learning platforms may personalize the learning experience to the specific requirements of each employee, thereby enhancing learning outcomes (Bhatt, 2022).

CONCLUSION AND DISCUSSION

Modern achievements, such as AI are transforming the way organizations can attract, recruit, and retain employees, and their benefits are undeniable. Despite its immense capabilities, AI is not a magician. It requires reliable information, proper questions, and the right human interpretation. AI models aren’t meant to replace human function, yet they serve as an excellent tool (Trisca, 2024). To achieve this, organizations must invest not only in the latest technologies but also and most importantly, in human expertise - individuals who fully understand how to optimize the benefits and reduce potential risks of these emerging technologies (Chamorro-Premuzic, 2019).

The HRM field is broad and complex, and talent management is even more complex. Implementing modern technology in talent management enables HRM professionals to step into the role of strategic partners for their organizations. This does not imply delegating important HRM decisions to bots; rather, it suggests using AI’s information and concepts to inspire the organization’s next moves toward enhancing the employee experience (Trisca, 2024).

The use of modern information technologies and artificial intelligence can certainly help organizations be more competitive in the labour market and attract and retain young talent, which is crucial for long-term success. However, excessive use of digital tools can lead to a loss of personal contact between employers and candidates, which may diminish the ability to assess personality and organizational culture. Therefore, it is important to carefully balance the use of technology with the need for personal contact and adaptation to the diverse preferences of employees.

Further research should examine how modern technologies impact employees’ motivation and engagement in the context of talent development, how they can be used to promote diversity and inclusion in the workplace, and how they can identify any unconscious bias in promotion, recruitment, and other HR tasks.

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