

Challenges for Human Resource Management in the Era of Dynamically Changing Technology: A Quantitative Investigation

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Abstract

Human resource management (HRM) procedures face considerable problems as a result of the rise of quickly evolving technologies. HRM experts must modify their tactics and procedures in this era to stay up with the quick pace of technology improvements. Managing the workforce's skills and knowledge, coping with the rising demand for remote work, and addressing the ethical and legal ramifications of technology use in the workplace are some of the major difficulties encountered by HRM in the era of dynamically changing technology. Additionally, the potential effects of automation and artificial intelligence on the workforce must also be considered by HRM professionals, as well as how to reskill and upskill workers for new positions that emerge as a result of technology advancements. In order to be prepared to meet the shifting needs of their organizations, HRM professionals must maintain an adaptive and proactive approach to managing human capital as technology continues to change the business landscape.

Keywords: Technology, HRM, Business, Organization, Skills, Knowledge

Introduction:

The success of any organization depends on effective human resource management (HRM), and today's fast-evolving technological environment has made those difficulties more difficult than ever. In order to preserve a competitive edge, HRM must handle a new set of difficulties brought about by the era of dynamically changing technology. The nature of work is changing as a result of the growing use of automation, artificial intelligence, and machine learning technologies. HRM must change to meet the organization's and its workforce's evolving needs.

Finding and keeping the proper talent is one of HRM's toughest difficulties in the age of rapidly evolving technologies. Employees now have more options than ever because of technological breakthroughs and evolving workplaces, so businesses must offer the correct incentives to keep them motivated and engaged. To keep top personnel, HRM must prioritize fostering a happy

work environment, providing competitive compensation packages, and enabling opportunities for professional growth.

Upgrading and reskilling the employees to stay up with the rapidly changing technology landscape is another difficulty. Some job roles may become obsolete as automation and AI become more common. To guarantee that employees have the skills necessary to fill these new roles, HRM needs to identify the skills needed for future job roles and invest in training and development programs. To keep staff members abreast of the most recent technical advancements, HRM must also promote a culture of continual learning.

A desire for more flexible work arrangements has also arisen in the age of rapidly evolving technology. The development of gig, remote, and freelancing employment is changing how people work, and HRM must be adaptable enough to support these new work arrangements. The organization's policies and procedures must be modified to accommodate these new work arrangements, and HRM must provide the infrastructure and technology required to facilitate remote work. Another difficulty is the employment of technology in HRM itself. HRM practitioners now need to be tech-savvy and know how to use these resources to their advantage due to the growing use of HRM software and solutions. To guarantee that HR professionals have the requisite skills to use these technologies effectively, HRM has to invest in technology and give the appropriate training. Last but not least, the era of rapidly evolving technology has also ushered in fresh difficulties relating to data security and privacy. Organizations must make sure that the sensitive employee data they handle through HRM is safe from hackers and unauthorized access. To establish efficient data security measures and guarantee compliance with data privacy requirements, HRM must cooperate closely with IT and cybersecurity experts. In conclusion, the age of rapidly evolving technology has presented HRM with a fresh set of difficulties. In order to meet these difficulties, HRM must be proactive, nimble, and adaptable to the shifting demands of the organization and its employees. Top talent needs to be attracted and kept, the workforce needs to be retrained and upskilled, flexible work arrangements need to be supported, technology needs to be used, and data privacy and security need to be ensured. By doing this, HRM can assist businesses in navigating the complexity of the technology landscape and sustaining their competitiveness in the fast-paced commercial world of today.

Literature Review:

Management of human resources (HRM) has always been crucial to every organization. HRM is faced with new issues as technology is developing quickly. The purpose of this literature study is to highlight the difficulties facing HRM in the age of rapidly advancing technology.

Managing the workforce in a technologically enhanced setting is one of the key issues for HRM. In their paper titled "Challenges and Opportunities of the Fourth Industrial Revolution," **Schwab and Sala-i-Martin (2017)** suggested that HR managers need to adjust to the changing environment and make sure that their staff members have the skills necessary to function in a highly digitalized world.

The requirement to draw in and keep the top talent in the sector is another difficulty for HRM. With the rise of remote work, there is an increasing need for qualified workers who can function independently. According to **Carnevale and Smith (2016)**, HR managers have serious concerns about the lack of trained workers in specific industries. Another difficulty for HRM is handling workplace diversity. Organizations need to make sure they have a varied staff that can function well together as they grow more globally oriented. **Jackson, Ruderman, and Eden (2014)** assert that HR managers must be conscious of cultural variations and seek to foster an inclusive workplace. Another difficulty is incorporating technology into HRM procedures including hiring, reviewing performance, and training. **Lawler (2015)** argues that rather than replacing their current processes with technology, HR managers should embrace it to enhance them. HR managers also need to make sure that workers have the ability to use technology efficiently.

The security and privacy of data is the final issue. HR managers must guarantee the security of employee data and compliance with data protection laws. According to **Sparrow and Hiltrop (2014)**, HR managers need to ensure that they put in place sufficient security measures and have a solid awareness of data protection requirements.

Lengnick-Hall and Lengnick-Hall (2003) look at the difficulties Singaporean businesses experience in luring, luring, and keeping qualified workers in the knowledge economy. They conclude that the demand for more flexible work arrangements as well as the rising competitiveness for talented workers are the three biggest obstacles.

Human resource management, according to **Nkomo and Arreola-Risa (2007)**, should prioritize retraining and upskilling current workers to ensure their continued employability in

the knowledge economy. They propose that this can be accomplished by offering staff training and development opportunities that allow them to pick up new knowledge and abilities.

Huselid (1995) investigates the link between organizational outcomes and practices used in human resource management. He discovers that strategies like employee involvement, training and development, and performance management can increase staff engagement and productivity.

Singh and Singh (2015) look at the difficulties Indian public organizations have managed their human resources. Assuring adherence to evolving labor laws and regulations, which calls for ongoing monitoring and updating of policies and procedures, is one of the biggest obstacles they discover.

Human resource management issues in the age of rapidly evolving technology:

- **Recruitment and Retention:** Finding and keeping competent workers is one of the major issues facing HRM in the age of rapidly evolving technologies. **Brink (2015)** asserts that the rapid growth of technology has resulted in a lack of skilled workers, making it challenging for HRM to locate and keep employees who have the necessary abilities.
- **Training and Development:** In the age of rapidly advancing technology, HRM also faces difficulties with regard to employee training and advancement. **D'Cruz and Noronha (2013)** claim that in order to give workers the proper training, HRM must stay up with the most recent technological advancements.
- **Communication:** Another key problem for HRM in the age of rapidly evolving technologies is communication. In order to ensure successful contact with employees, HRM must incorporate new communication technologies, claim **Budhwar and Debrah (2013)**.
- **Cybersecurity:** As technology advances, organizations are even more susceptible to cybersecurity threats. **Kavanagh, Thite, and Johnson (2015)** assert that HRM must create plans to address cybersecurity concerns and guarantee the security of employees' personal data.
- **Diversity of the Workforce:** The age of rapidly evolving technologies has also resulted in a diversified workforce. In order to effectively manage the varied workforce, HRM must foster an inclusive and diverse culture, claim **Jackson, Ruderman, and Conger (2014)**.

Objective of the Study

To measure the challenges for human resource management in the era of dynamically changing technology

Methodology

This study utilized a structured questionnaire to conduct a survey, and statistical methods such as mean & t-test were used to analyze the responses from 213 participants. The sampling method used in this research was convenience sampling, where individuals were selected based on their accessibility & willingness to participate.

Table 1 Challenges for Human Resource Management in The Era of Dynamically Changing Technology

Serial No.	Statement of Survey	Mean Value	t-value	p-value
1	HR professionals need to continuously update their knowledge and skills to understand and leverage new technologies for various HR functions.	4.21	9.139	0.000
2	HR departments face challenges in attracting and retaining highly skilled professionals who are well-versed in the latest technologies.	4.39	10.774	0.000
3	Employees need to acquire new skills to adapt to changing job requirements and emerging technologies.	4.31	9.563	0.000
4	The dynamic nature of technology impacts job roles and profiles, requiring HR to redefine and restructure job descriptions to match evolving skill requirements.	4.00	5.042	0.000
5	HR professionals may ensure that employee data is protected and comply with relevant data protection regulations.	3.77	2.857	0.002
6	HR departments face the challenge of fostering employee engagement and maintaining a sense of	4.49	11.815	0.000

	connection and collaboration among dispersed teams.			
7	HR managers play a crucial role in leading and managing change, ensuring smooth adoption and integration of technology within the workforce.	4.09	7.316	0.000
8	HR must navigate these challenges by ensuring fairness, transparency, and ethical decision-making in technology-related processes.	4.11	8.366	0.000
9	HR managers need to bridge this divide by providing adequate training, resources, and support to ensure all employees can effectively leverage technology in their work.	3.81	4.046	0.000
10	While technology can streamline HR processes and improve efficiency, there is a need to strike a balance between automation and the human touch.	4.42	12.083	0.000

Table1 demonstrates the mean values for each of the statement of the study done on the “challenges for human resource management in the era of dynamically changing technology”, examining the average scores, the statement that obtains the highest mean score can be described as “HR departments face the challenge of fostering employee engagement and maintaining a sense of connection and collaboration among dispersed teams”, which has the mean score of 4.49, Looking at the next statement which is “While technology can streamline HR processes and improve efficiency, there is a need to strike a balance between automation and the human touch” the mean score is found to be 4.42. Looking at the mean value of 4.39 for the statement “HR departments face challenges in attracting and retaining highly skilled professionals who are well-versed in the latest technologies” shows that balancing human touch with automation is also responsible for human resource management. Looking at the other aspect of human resource management in the era of dynamically changing technology is, “Employees need to acquire new skills to adapt to changing job requirements and emerging technologies” which displays the mean score of 4.31, and the statement “HR professionals need to continuously update their knowledge and skills to understand and leverage new technologies for various HR functions” showcase the mean value of 4.21. Then the statement “HR must navigate these challenges by ensuring fairness, transparency, and ethical decision-making in

technology-related processes” obtains mean value of 4.11 and the statement “HR managers play a crucial role in leading and managing change, ensuring smooth adoption and integration of technology within the workforce” has 4.09. The statement “The dynamic nature of technology impacts job roles and profiles, requiring HR to redefine and restructure job descriptions to match evolving skill requirements” showcase the mean value of 4.00. Therefore, the last two statements fall within the lowest category or level, “HR managers need to bridge this divide by providing adequate training, resources, and support to ensure all employees can effectively leverage technology in their work” mean value of 3.81, the statement “HR professionals may ensure that employee data is protected and comply with relevant data protection regulations” has 3.77. The significance of the t-value for each statement in the investigation on the challenges for human resource management in the era of dynamically changing technology is significant. The t-value statements were positive, and their significance value was less than 0.05, indicating a significant relationship between the two variables.

Conclusion:

In conclusion, the modern era's human resource management faces unheard-of issues as a result of technology's rapid advancement. Organizations must adapt to new technologies and use them to spur innovation and growth as they work to maintain their competitiveness and satisfy the always-changing needs of their customers. However, this necessitates fundamental adjustments in how businesses approach their HR operations. The demand for a highly competent and adaptive workforce is one of the biggest problems facing HR in the technological age. Organizations require workers who can pick up new skills fast and adjust to shifting work settings as technology continues to advance. HR managers must determine the competencies and abilities needed for their workforce and build a plan for learning and development to assist employees in acquiring them. The administration of virtual and remote teams presents another difficulty for HR. Because of the prevalence of remote work, HR managers need to reconsider their retention and recruitment plans and make sure that their staff members have access to the tools and technologies they need to be productive from any location. Additionally, they must make sure that remote workers are connected, engaged, and motivated, which can be difficult in a virtual setting. The use of technology in the workplace raises a number of ethical and legal issues, including privacy, data security, and cybersecurity, which HR managers must be proactive in recognizing and resolving. To ensure that their technology policies and practices are consistent with pertinent laws and rules, they must

collaborate closely with IT and legal teams. In conclusion, in order for organizations to be able to attract, retain, and develop the talent they need to succeed, they must address the issues that HR faces in the age of rapidly evolving technology. To keep their businesses ahead of the curve in a market that is becoming more and more competitive, HR managers must be flexible and adaptable, adopting new technology and methods.

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