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The Role of Artificial Intelligence (AI) Adoption in Modern HRM: Impact on Employee Upskilling and Workplace Adaptability

Jashim Howlade^{1*}, Md Hossain Ahmed²

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ABSTRACT

This study explores how AI use in HRM has affected employees' ability to upskill and an organization's. The study adopts a mixed-methods strategy, consisting of semi-structured interviews, focus groups, and survey analysis of 150 respondents: HR professionals, employees, and AI experts from technology-oriented and traditional industries in Bangladesh, to understand the role of AI in HRM on organisational readiness and resilience. The results show that 82% of respondents are aware of the importance of AI in identifying their skills gaps and delivering them in a personalised way, and 78% believe that AI-supported performance measurement helps to inform skill mapping and personalised interventions for upskilling. Also, 85% say continuous learning programs are important to being flexible in their workplace in an AI-powered world. The research shows that there are strong positive links between AI, uptake in HRM and employee upskilling ($r = 0.78$) and between upskilling and workplace adaptability ($r = 0.82$). These results serve to inform HR professionals and policymakers on how to effectively incorporate technology with human resource development. The work builds on the emerging body of knowledge of AI-HRM integration through its empirical evidence in the context of an emerging economy and the framework suggestion emphasising the utilisation of AI to improve employee capability and adaptability of the organisation.

INTRODUCTION

Today's working world is undergoing another vista of change due to the rapid evolution of AI technologies. Artificial Intelligence solutions have become a staple in numerous industries, particularly to boost operational productivity, optimise workflow and provide a competitive edge. In HRM, AI is transforming various processes, including automated recruitment systems and intelligent performance evaluations, which revolutionise the way HR processes are handled (Siaw & Ali, 2024). But this technological revolution has consequences for the skill sets that will be needed and for the ability of organisations to adapt. Incorporating AI in HRM has paved the way for new HRM concepts for employee development, prompting companies to rethink their training and skill-development strategies and workforce planning. With the increase of routine tasks being handled by AI systems and the changes in job requirements, the need for advanced cognitive and technical skills has become more pronounced. Now, however, companies need to deal with the complex challenge of ensuring they have the skills to work in an AI-enabled environment. Therefore, employee upskilling, job flexibility and adaptability as key organisational competencies are required to focus on the strategic level (Georgescu *et al.*, 2024). This means there needs to be a strategic shift in upskilling employees and developing the competency of being ready to adapt to the task.

Although there are many publications on the use of AI in HRM, there is a need to understand how these

technologies, in particular, relate to the upskilling of employees and the adaptability of organisations. Previous studies have mainly focused on the technical issues and/or impacts of AI adoption in human resources processes such as hiring, employee performance management, etc. There is, however, a lack of empirical evidence on the ways in which AI-based HRM practices help or hinder development and workplace adaptation among employees, especially in the context of emerging economies (Jaiswal *et al.*, 2023). These are overseen by this study, which explores how well AI is being used today in HRM and how it can affect the upgrading and adaptability of workplace employees. The study explores to address three main concerns: Firstly, the impact of AI technologies on skill gap identification and the planning of personalised training programmes; secondly, how the evaluation of human performance using such technologies relates to targeted training upskilling interventions; and thirdly, how the use of such technologies in HRM correlates with organisational adaptability in changing business contexts. This research holds importance from both the theoretical and practical aspects. Both conceptually and practically, it adds to the ongoing debate on how Artificial Intelligence can be incorporated into HRM practice in the context of emerging economy Bangladesh, which is undergoing a very fast rate of digital transformation (Hui *et al.*, 2024). In practical terms, the findings provide a practical guide for learning and development professionals, organisations, and providers in leveraging AI technologies to keep organisations competitive and enrich their learning and

¹ Research Assistant, Department of Management, University of Dhaka, Bangladesh

² University of Ulster MSc International Business Birmingham, United Kingdom

* Corresponding author's email: jashim-25th-2018120231@mgt.du.ac.bd

development programs. Recognising how the parameters of AI adoption, employee upskilling and adaptability influence each other will help organisations move forward on a path to better prepare for the challenges of the AI economy (Priksat *et al.*, 2024). The literature review section collates the existing literature related to the study on the roles of AI in HRM, adaptability and upskilling of employees in the workplace. Materials and Methods section gives information on the research design, data collection techniques and analysis. Results and discussion are included. Finally, there is a summary of the important results, recognition of limitations, and some ideas for further research.

LITERATURE REVIEW

Over the past few years, there has been a growing interest in the application of AI in human resource management (HRM), spurred by the recognition of its potential in the business world. It seems that human resource management (HRM) has garnered more and more attention in the academic arena for studies examining the juxtaposition of AI and HRM, especially in light of the realisation of AI's potential in the business environment in recent years. Many aspects have been included in this literature review, and knowledge from 3 related disciplines has been put together: digital age upskilling of employees, adaptability in technologically fluid environments, and adoption of AI in HRM.

Artificial Intelligence in Human Resource Management

AI has revolutionised HRM practices and reshaped the way organisations manage their human resources. Vrontis *et al.* (2023), analysing 45 studies examining the use of AI, robotics, and advanced technologies in HRM contexts, were able to conclude that intelligent automation has led to new approaches for managing human resources, drastically changing the performance of the organisation. By analysing 13,136 potentially relevant papers published in some of the world's foremost journals, their findings indicate that AI technologies present significant potential for improving HRM productivity, but also pose significant technological and ethical challenges to the organisations that will undertake their use.

In their study, Budhwar *et al.* (2022) studied the application of AI in HRM in both local and international companies and noticed a substantial use of AI in the past decade. Their research led them to possibilities for future investigation such as measuring the impact of AI adoption on outcomes at the individual and organisational level, as well as the social presence of AI and robots. Even though these technologies represent a potential revolution, the authors pointed out that the research on the usage of these AI-based applications in HRM still lacks unification, and further studies are needed on human-AI interactions in multinational companies.

With respect to the Public Administration, Johnson *et al.* (2022) discussed the development of HRM programmes

that have benefited from the rise of big data and AI technologies, such as machine learning and computer-controlled technology, to increase administrative efficiency and effectiveness. They pointed out the benefits and challenges of the usefulness of AI tools in HRM, such as considerations of public values, fairness, and the principles of traditional merit systems. The results of this study emphasise the need to strike a balance between technological innovation and ethics in relation to HRM practices.

Employee Upskilling in the Digital Era

Given the rapid advancement of AI technologies, ongoing employee development and upskilling efforts are crucial. Aimukhanbetova *et al.* (2019) highlighted that in the context of maintaining the balance of individual and company objectives, HR workers should have at their disposal information and experience to enable their employees. As part of their studies, they pointed to the need for proper training facilities to produce technically trained and professional staff and emphasised that knowledge of the latest developments and trends in the industry was an important requirement for employees.

Enterprises have a new conversation on upskilling, with AI models that generate. To explore the impact that generative AI models like ChatGPT, DALL-E 2, and Midjourney have on employment in online labour markets in the short term, Hui *et al.* (2024) examined the experience of German workers with these tools. What they concluded was that those with jobs that were most impacted by these technologies saw reductions in their chances of being employed and earning income, including high-quality service providers. The current study highlights the need for proactive upskilling measures to address the challenge of displacement as a result of AI use. In a recent study published by Damoli *et al.* (2021), they investigate the relationship between AI patenting activities and labour productivity for 5,257 companies worldwide. Their analysis showed that the usage of AI patent applications had a positive effect on labour productivity, especially in the low-tech service sectors and SMEs. This discovery showed that rapid uptake of AI-driven applications into the production process is vital to unlock productivity benefits and will require related expenditure to upskill employees.

Workplace Adaptability in Technologically Dynamic Environments

Workplaces today have become more contingent – adaptability to change regarding technology is one competency that has become critical. The literature indicates that adaptability in the workplace is both an individual and organisational ability to adapt. There are various characteristics of 'adaptability' that are being discussed, and the addition of AI to HRM practice has been cited as one such important influence (Chuang *et al.*, 2024). AI-powered HRM tools also suggest that AI can improve organisations' adaptability by delivering data-

backed HR insights into the abilities and development required of employees. AI analytics can help identify skill gaps and provide a framework for developing focused interventions to help plug these skills deficits and better equip employees for the changing demands of the job (Verma & Singh, 2024). Moreover, the AI-driven performance assessment systems provide continuous feedback mechanisms, which enable employees' development and learning.

Petrone and Helenius (2003) have investigated the link between upskilling and adaptability in the workplace in various studies, finding positive relationships between the two at all times. Organisations that focus on comprehensive training and development programs are more likely to have a higher degree of adaptability when it comes to technological change and market fluctuations. Given that relationship, upskilling programs should be designed to address present skill gaps and steer clear of identifying these skill shortfalls for the way forward, with a focus on strengthening your organisation's future.

Theoretical and Research Gap

The literature reviewed shows remarkable progress in the understanding of the implications of AI for HRM, upskilling of employees and adapting to workplace needs. Nevertheless, there is an important lack of case studies and empirical evidence on how the specific adoption of AI technologies affects upskilling outcomes and the adaptability of organisations, especially when this is done in new economy contexts. There is a lack of understanding of how organisations in transitioning economies react to the challenges of integrating AI while building their workforce capabilities, as addressed by existing studies, which in turn have mostly focused on developed economies. This research fills these gaps by examining the relationships between 'what is achieved from employee upskilling' that Emerging Technology HRM (ETHRM) has created through HRM, adaptability of the work environment and the Bangladesh context. This research offers empirical findings from a newly established economy that can help shape more robust theoretical frameworks and practical solutions for harnessing AI tools to improve job capabilities and organisational resilience.

MATERIALS AND METHODS

This section introduces the methodological approach used to explore the impact of AI adoption on upskilling and adaptability in the workplace and its potential for enhancing HRM in the modern world. The adoption of a mixed-methods research design enables researchers to comprehensively grasp the complexity of AI-HRM adoption and its impact on workforce development.

Research Design

The research design is sequential explanatory, with the variables used in this study: quantitative survey analysis and qualitative interview/focus group. This method

allows for a thorough exploration of the phenomenon under study, with a depth of analysis and explanations that deliver understanding of the impact of AI adoption on employee knock-on training and adaptability in the workplace. The quantitative element offers some generalizable insight into a wide sample, while the qualitative element will provide a deeper understanding of a single experience, or the context of an experience in an organisation. The qualitative component engages a phenomenological approach to gain insight into the lived experiences of the stakeholders studied – HR professionals, employees and AI developers. This method is suitable for examining the meaning and interpretation that people may have about the consequences of AI in their professional lives and career prospects.

Participants and Sampling

The study uses a purposive sample, which was done so that representation across the different technology-driven and traditional sectors could be gathered. Participants are to be characterised by their first-hand experience of an HRM practice in line with AI and by employee development work. The sample consists of 150 participants, comprising 50 HR professionals and 80 employees and specialists in AI (20%). HR professionals come from diverse organisations in various industry sectors, such as Technology, Finance, Manufacturing, Services, etc. Employees hail from various career stages ranging from entry-level to mid-level to senior. AI specialists are a diverse group of individuals, such as system architects, AI consultants, and developers, engaged in the design and application of AI solutions for workforces. The sample size of participants offers diversity to gain a greater understanding of how AI influences a wide range of organisational roles and situations.

Data Collection Procedures

Data collection has two approaches: Primary and Secondary data. Semi-structured interviews, focus groups, and structured surveys are used for the collection of primary data. The HRDs and AI experts are interviewed using semi-structured interviews to gain insights into how they view the application of AI in detecting skills gaps, creating training content, and improving adaptability in the workplace. Individual interviews are approximately 45-60 minutes in length and are audio-recorded with consent.

Employee-session focus groups are held to collect group feedback on training programs, performance assessment systems, and organisational readiness and effectiveness for implementing AI-based training solutions. Focus groups consist of 6 to 8 people and are generally 90 minutes long. The group dynamics enable discussion of common experiences and different perspectives. All participants undergo structured surveys to measure perceptions of AI's impact on employee upskilling and adaptability in the workplace. The survey measure is a five-point Likert scale (1 = strongly disagree to 5 = strongly agree)

covering various aspects. The validity and reliability of the survey are tested on 20 people in a pilot test before administration to the entire population. Secondary data are gathered by examining organisational documents, HR policy history and reports on the implementation of AI to help to contextualise ideas from primary data and to triangulate findings.

Ethical Considerations

Throughout the research process, the guidelines for ethics are followed. Full informed consent is given to all participants before data is collected, which informs them about the aims of the research, the use of the data and the rights of the participant. Confidentiality is ensured by anonymisation of the answer distribution and secure data storage. Subjects are always advised that they can withdraw from the study at any time without penalty. Researcher reflexivity and triangulation of data sources are used to minimise possible biases in the analysis.

Data Analysis

The quantitative data of the survey were analysed manually using statistical software with descriptive statistics (mean, standard deviation, frequencies) and inferential statistics (correlation analysis and regression analysis). Correlation coefficients are computed to test the relationship between (1) the adoption of AI in HRM, (2) the consequences on upskilling employees, and (3) workplace adaptability. Interviews and focus group data are transcribed and analysed using thematic analysis, and qualitative data are verbatim from the interview or focus group. There is a preset methodology of coding, categorisation and themes over the course of the analysis. Initial codes are created inductively from the data, and then organised into wider concepts and themes. The analysis is directed by the research question(s) and free to emerge themes.

Mathematical Framework

The relationship between AI adoption, employee upskilling, and workplace adaptability is modelled using a multiple regression framework:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon \quad (1)$$

Where:

- Y represents workplace adaptability
- X_1 represents AI adoption in HRM practices
- X_2 represents employee upskilling outcomes
- X_3 represents organisational support for continuous learning
- α is the intercept
- $\beta_1, \beta_2, \beta_3$ are regression coefficients
- ϵ is the error term

This model enables the relative impacts of AI adoption approaches and upskilling programs on adaptability outcomes of organisations to be examined.

RESULTS AND DISCUSSION

The empirical findings of this study are presented in four subsections: effect of AI on skill identification, capability training individualisation, performance assessment, and adaptability to work. The results are based on the quantitative data from the 150 participants of the questionnaires, and the Qualitative data obtained from the interviews and focus group, comprising thematic analysis of the data.

AI's Role in Skill Gap Identification and Training Personalisation

The responses in the survey shown in Table 1 indicate high consensus on AI's capabilities in skill gap identification and personalisation of training programs. With a mean score of 4.2 and SD of 0.7, a high percentage of respondents agreed or strongly agreed that AI aids in determining employee skill gaps. Likewise, 78% of the participants agreed that AI allows for personalised training recommendations (mean = 4.1, SD = 0.8). This was especially true regarding the need for ongoing learning, as 85% of respondents indicated that employees need to continually update skills to be adaptable (mean = 4.4, SD = 0.6).

These quantitative findings are supported by the qualitative findings. Interviewees noted how AI will

Table 1: AI's Role in Skill Identification and Training Personalisation

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean Score	Standard Deviation
AI helps identify employee skill gaps.	40%	42%	10%	5%	3%	4.2	0.7
AI enables personalised training recommendations.	35%	43%	12%	7%	3%	4.1	0.8
Employees must continuously update skills to remain adaptable.	50%	35%	10%	5%	0%	4.4	0.6

impact workforce development. As one of the senior HR professionals of a technology company explained: "AI analytics provide us with levels of insight into our workforce that we have never had before, and we can now start to identify skill gaps as they happen, and implement

targeted training interventions when necessary, without waiting for the annual performance review. Supporting this view, Aimukhanbetova *et al.* (2019) argued that it is essential to have an up-to-date picture of industry trends and developments to support workforce development.

The participants of the focus groups also identified AI's role in personalised learning. One individual in an industrial firm said that courses are recommended according to their performance records and career progression and are more relevant than the normal training courses we used to obtain. This makes the trend towards personalised development experiences that are also relevant and meaningful to work more evident. The consensus over the need for continuous learning underscores the necessity of learning systems for a working world of artificial intelligence. This finding aligns with Budhwar *et al.* (2022), who highlighted the need for HRM to actively play a part in reskilling and closing skill gaps arising from automation. The results of the study show that it is time to change away from episodic training and towards a model of continuous learning that affords continuous skills development in the organisation.

AI-Enhanced Performance Evaluation and Targeted Upskilling

Table 2 includes a discussion of the link between AI-based performance evaluation and goal-oriented upskilling interventions. The findings show that AI can improve the objectivity of performance evaluation is well received (mean = 4.3, SD = 0.7) with 80% of the respondents agreeing or strongly agreeing. Additionally, 75% reported that AI-driven performance feedback helps to inform training interventions (mean = 4.0, SD = 0.9).

The results corroborate those of Vrontis *et al.* (2023), who found that intelligent automation has brought new ways of managing personnel which have a significant effect on organisational performance. Qualitative data provide insight into the opportunities and contributions of evaluation systems that enable upskilling with AI. An AI expert interviewed for the study explained that, "Our

Table 2: AI-Enhanced Performance Evaluation and Upskilling Interventions

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean Score	Standard Deviation
AI-driven performance evaluation enhances objectivity.	45%	35%	12%	5%	3%	4.3	0.7
AI-generated performance insights facilitate targeted training interventions.	35%	40%	15%	7%	3%	4.0	0.9
AI feedback helps employees understand development needs.	40%	38%	12%	6%	4%	4.1	0.8

performance analytics system isn't just for looking back; it provides forecasts and insights the HR team can then utilise to identify training requirements for staff going forward so they can create training programmes that will ensure their employees are prepared for their future roles. Overall positive attitudes towards the use of AI in evaluation with reservations. The clear and continuous feedback provided by AI is not the same as the annual feedback I've received in the past, and in some ways I feel it doesn't capture all of the nuances of my career. This highlights the importance of algorithmic and human evaluation for a holistic and fair evaluation. Based on the findings of this research, it is found that the framework

of theoretical research given here can support the process of providing training that can be taken in a targeted way. With AI-powered performance analytics, businesses can more effectively uncover growth opportunities and allocate resources. This creates a virtuous cycle: When evaluated, it is developed; when developed again it performs; then it is evaluated once more and developed again leading to more and more data being produced for further development.

Impact of AI Adoption on Workplace Adaptability

Table 3 shows the results concerning the connection between AI application in HRM and adaptability at work.

Table 3: AI Adoption and Workplace Adaptability

Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree	Mean Score	Standard Deviation
AI adoption improves organisational adaptability.	42%	40%	10%	5%	3%	4.2	0.7
AI-driven HRM practices support a continuous learning culture.	38%	40%	12%	7%	3%	4.1	0.8
Upskilling initiatives enhance workplace resilience.	40%	40%	12%	5%	3%	4.2	0.7

The findings show high positive correlations in several aspects. The results on the adaptability of organisations due to the use of AI showed that a large proportion of the respondents (82%) agreed that AI adoption enhances the adaptability of the organisation (mean = 4.2, SD = 0.7). Further, 78% said AI-enabled HRM processes foster a culture of continuous learning (mean = 4.1, SD = 0.8), and 80% agreed that upskilling efforts build resilience in the workplace (mean = 4.2, SD = 0.7).

The rich qualitative findings inform these quantitative findings. Focus group discussions revealed that workers believe that the adoption of AI is an enabler and driver for adaptability. According to the spokesperson from a tech company, “Our company began to work with AI learning systems, and I got new capacities much faster than earlier. Once we started using these learning systems a lot because of a break in working remotely during COVID, the AI system gave me suggestions for the training modules that had the most relevant content to my needs.

HR experts emphasised the need to be flexible and

adaptable when it comes to AI. AI helps companies plan in advance for skills shortages without even deploying the new technology in-house, so we can be proactive, rather than reactive, to initiatives for change,” said a senior HR director at a manufacturing company. This result confirms that of Damoli *et al.* (2021) which found a positive impact of AI for labour productivity. The current study builds on this knowledge by showing how productivity improvements are achieved via adaptation and upskilling. Firms that succeed at using AI for HRM appear to have increased ability to advance changes in the environment and demands.

Correlation Analysis: AI Adoption, Upskilling, and Adaptability

Table 4 shows the correlation analysis of the relationships between AI adoption in HRM, employee upskilling outcomes, and workplace adaptability. These results indicate high positive correlations between all the key variables.

The results of the correlation analysis show some

Table 4: Correlation Matrix of AI Adoption, Upskilling, and Adaptability Variables

Variable	AI Adoption in HRM	Skill Gap Identification	Training Personalization	Performance Evaluation	Upskilling Outcomes	Workplace Adaptability
AI Adoption in HRM	1	0.75	0.72	0.78	0.76	0.78
Skill Gap Identification	0.75	1	0.82	0.80	0.84	0.80
Training Personalization	0.72	0.82	1	0.79	0.86	0.82
Performance Evaluation	0.78	0.80	0.79	1	0.81	0.79
Upskilling Outcomes	0.76	0.84	0.86	0.81	1	0.82
Workplace Adaptability	0.78	0.80	0.82	0.79	0.82	1

Correlation is significant at the 0.01 level (2-tailed)

important findings. First, the use of AI in HRM shows positive correlations with skill gap identification ($r = 0.75$), training personalisation ($r = 0.72$) and performance evaluation ($r = 0.78$). The relationships show that organisations that are more advanced in their AI use for HRM practices have higher potential in detecting development needs and providing targeted interventions. Second, the results of the upskilling show strong positive correlations with the implementation of AI for the socialisation of HRM ($r = 0.76$) and all the AI-enabled HRM functions (including the identification of skills gaps, training personalisation, and performance evaluation, $r = 0.84, 0.86$ and 0.81 , respectively). The trend indicates that the holistic application of AI in HRM practices can lead to better upskilling results.

Third, there is a strong positive correlation between workplace adaptability and AI adoption ($r = 0.78$) and upskilling outcomes ($r = 0.82$). The link between

upskilling and adaptability is especially salient, as growth in employee skills is directly related to an increase in their ability to adapt. The regression analysis using the model specified in Equation 1 reveals that AI adoption ($\beta_1 = 0.42, p < 0.001$), upskilling outcomes ($\beta_2 = 0.38, p < 0.001$), and organizational support for continuous learning ($\beta_3 = 0.25, p < 0.01$) collectively explain 68% of variance in workplace adaptability ($R^2 = 0.68, F(3, 146) = 103.4, p < 0.001$). The findings validate the hypothesised relationships and reveal the impact of integrated AI adoption and workforce development strategies.

Discussion

Overall, the findings of this research offer strong insights into the beneficial impact of adopting AI on contemporary HRM practices, especially in the areas of employee upskilling and adaptability in the workplace. The results will not only aid in deepening the theoretical

knowledge of AI-HRM integration but also provide practical insights for organisational practice (Siaw & Ali, 2024). The broad agreement on the potential of AI in the context of skill gap analysis and tailored training is consistent with the growing body of literature on the use of AI in workforce development. A great 82% of respondents recognize the role AI plays in their workforce planning process by helping to identify a case of skills gaps, which demonstrates the overall uptake of AI analytics as a useful tool. This finding is concurrent with the contribution by Vrontis *et al.* (2023), which found that intelligent automation would have a transformative effect in HRM environments. It enables organisations to make training interventions ‘pre-emptive’ rather than forcing something to be done because the skills gaps have been identified as a ‘gap’.

Additionally, the AI-Based evaluation has seen positive responses, with 80% finding it more objective than traditional methods, indicating a reasonable acceptance of using AI in the organizational context for performance evaluation. This result is especially relevant in an era when there has been a lot of doubt regarding the evaluation systems based on computers (Taslim *et al.*, 2025). The correlation between targeted upskilling interventions and the assessment via AI is quite high with $r = 0.81$, meaning that using AI analytics to generate actionable insights can be incorporated into development planning. The challenge for HRM is that these technologies should be used while retaining human intervention and ensuring equity and neutrality in the assessments (Budhwar *et al.*, 2022). The relationships among the three organisational capabilities—AI adoption, upskilling outcomes and workplace adaptability—and the rest of the scales are quite high, 0.78 and 0.82, respectively. The virtuous cycle seems to be created around organisations successfully using AI across HRM and to further expand their organisation’s capacities, which further enhances the organisation to adapt – eventually in a nice loop. The finding advances the work of Damoli *et al.* (2021) who identified upskilling as one of the key ways AI is used to enhance productivity. The results of the regression analysis indicated that the adoption of AI, upskilling results and continuous learning support were all significant, accounting for a considerable percentage of the variance when it comes to adaptability in the workplace ($R^2 = 0.68$). This means that these are basic components of organisational resilience in a changing world. Regarding the beta values, the positive and high beta of the adoption of AI ($\beta_1 = 0.42$) and the outcomes of upskilling ($\beta_2 = 0.38$) highlight the importance of technological integration and human capital development, respectively. Organisational cultures matter a great deal ($\beta_3 = 0.25$), in relation to continuous learning support. The results have relevance for the practice of HR. Companies seeking to adopt a more flexible approach to the job, focusing on skill development programs for employees, find it essential to their success in HRM (Fenwick *et al.*, 2023), along with investing in AI tools. The synergistic relationships

seen indicate that neither technology nor upskilling skills alone is enough and that combined efforts that leverage the use of AI for enhancing upskilling will yield better results (Rodrigues, 2024). Building learning ecosystems that support personalised learning pathways through the use of AI analytics to inform learning is just one of the challenges for HR professionals, as is using performance assessment to trigger personalised interventions and creating organisational learning environments. The study also helps you familiarise yourself with challenging questions you must consider. The overall sentiment was favorable towards the application of AI, but creating algorithms to assess student learning and the need for human judgment were areas of concern. The concerns raise the significance of keeping balanced approaches with a mix of AI capabilities and human expertise. Organisation talent management processes should use AI to complement, not replace, human decision making.

CONCLUSION

The study offers real-world data about the impact of the adoption of AI in HRM in the modern era and how that affects employee upskilling and workplace adaptability. The findings indicate that the use of AI technologies leads to a wide range of opportunities for workforce development, including: Identification of skill gaps, Training personalization, and AI-driven assessment of performance. The widespread agreement on continuous learning suggests that AI-powered economies are adaptive, and that lifelong learning is crucial in modern organisations. The results showed high positive correlations between the use of AI in HRM and upskilling ($r = 0.76$) and between HR upskilling policies and adaptability in work ($r = 0.82$). These connections connect the integration of technology, the development of human capital resources, and the firm’s resilience. AI-using organisations establish good feedback loops of capability building, which fuel their adaptiveness in change. The significance of integrated approaches is supported by the regression analysis, which shows that the collective variance in workplace adaptability explained by the factors involves in AI adoption, upskilling outcomes, and continuous learning support is 68%.

The results underscore the need to be strategic about integrating technology adoption into workforce development for HR practitioners. AI tools should be used as part of a holistic development approach, and HR leaders must focus on learning ecosystems in which AI analytics feed development pathways that are tailored to the individuals and on an ongoing learning process that is ingrained in the organisation’s culture. The study highlights the need for policymakers to manage the integration of AI responsibly and equitably by promoting reskilling programs, safeguarding workers during the transition, and encouraging partnerships between industry and education to bridge skill gaps and meet new needs. There are some caveats to note. This limitation of generalisability may be attributed to the fact that the study

was carried out in Kazakhstan, the cross-sectional study design does not allow a causal analysis to be made, and self-reported data might lead to answer biases. For future research, longitudinal designs, international comparative analyses, experimental application of AI-based training methods, and an exploration of ethical issues of fairness in algorithmic assessment should be used. With the development of artificial intelligence (AI) technologies, evidence-based insights into best workforce development and adaptability strategies are more valuable now than ever. This research builds on this growing body of insights and offers a base for further studies that can shed light on the complicated challenges of organisational adaptability, employee upskilling, and the adoption of AI in the workplace.

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