**The Impact of AI and Automation Policies on Employee Development: a thematic approach**

***ABSTRACT***

*Over the past few years, automation and artificial intelligence (AI) have become more active in transforming the global labour market and redefining industries, organisational forms, and employment relationships. The traditional job role is also altered by the introduction of new technologies into the workplace, necessitating a reevaluation of policies that govern training, reskilling, and career advancement. This qualitative paper examines the effects of these technological advancements on employee development, with a particular focus on job transformation and reskilling, as well as psychological adjustments and organisational response. The selection of a secondary method of data collection, rather than a primary method (interview or survey), was influenced by the fact that the research topic involves the analysis of policies, reports, case studies, and academic literature that are dedicated to the issues of AI, automation, and employee development. . It employs a thematic approach to emphasise emergent trends and issues in technologically induced workspaces. A thematic analysis method was employed to identify patterns, ideas that tend to recur, and significant discoveries in the data that was collected. The findings refute the notion that, despite the fact that AI and automation increase productivity and stimulate innovation, they also underscore the importance of ongoing learning and adaptability for employees. The traditional employment roles are in the process of being transformed, and there is an increasing demand for interpersonal, analytical, and digital skills. Nevertheless, the disparity in access to training programs poses a threat to the development of even more profound skill gaps and exacerbates inequalities, particularly among more vulnerable workers. Simultaneously, the psychological aspect of technological change, which includes the apprehension of losing one's job and the reluctance to learn new tools, is also a significant impediment to the seamless transition. It is evident from these results that the efficient development of the workforce in technology-driven environments is contingent upon the strategic alignment of human resource practices and technology adoption. Companies and organisations that establish an inclusive learning environment, open communication patterns, and reskill their program design are more likely to increase employee engagement and retention. This research concludes with practical recommendations for policymakers and organisations to establish a workforce that is future-ready, adaptable, and flexible in the context of AI and automation. The efficacy of AI and automation will be contingent upon the capacity of organisations and policymakers to foster their growth by emphasising employee development, despite their transformative potential.*

***Keywords:*** *artificial intelligence, automation, employee development, reskilling, upskilling, workforce transformation*

**INTRODUCTION**

Artificial intelligence (AI) and automation are experiencing a new Spring in the 21st century. While these technologies have engendered discourse on numerous social, ethical, policy, and legal implications, few topics have received more attention than their impacts on the future of work (Nazareno & Schiff, 2021; Ribeiro et al., 2021). Over the past few years, automation and artificial intelligence (AI) have become more active in transforming the global labour market and redefining industries, organisational forms, and employment relationships. Despite the fact that companies are integrating AI-based technologies and automated work environments to enhance productivity and efficiency, there is a growing apprehension regarding the potential impact on human capital, particularly in terms of employee learning and development. The traditional job role is also altered by the introduction of new technologies into the workplace, necessitating a reevaluation of policies that govern training, reskilling, and career advancement. The contemporary workplace is presently characterised by an unprecedented transformation driven by the accelerating integration of artificial intelligence (AI) and automation technologies. While this digital revolution presents significant opportunities for increased productivity, innovation, and economic growth, it raises critical concerns regarding the potential disruption to traditional employment patterns and the human workforce (Olaniyi et al., 2024). This transformation transforms the role of AI and automation policies in employee development into a topic of critical concern among policymakers, organisational leaders, and scholars.

The modern business approach is being underpinned by automation and AI, which are no longer mere conjectures. The McKinsey Global Institute (2023) predicts that automation in up to 30% of work activities across multiple industries is feasible by 2030. This endeavour is primarily motivated by the maturation of machine learning, robotics, and natural language processing tools. These technologies enable machines to execute tasks that were previously performed by humans, including data entry, customer service, and the formulation of complex decisions. The traditional employment models and models of creating value within organisations have been undermined by this change in technology, which has also provided efficiencies and cost-saving advantages to their operations. Consequently, organisations have been compelled to revise their models of employee value creation and the competencies that employees must possess in order to succeed in the future.

Concurrently, the nature of labour is undergoing a significant transformation. To be more specific, routine, repeatable work is being transferred to an automated system, and non-routine cognitive and interpersonal skills, such as creativity, emotional intelligence, and problem-solving, are becoming strategic (World Economic Forum [WEF], 2023). The employers and employees are subjected to significant pressures as a result of the dynamic skill balance. Consequently, organisations must be able to articulate workforce-planning procedures that are consistent, and employees must be able to engage in continuous learning in order to remain visible in a technology-driven environment that is ever-evolving.

In response to these disruptive forces, governments and institutions have initiated policy interventions that are designed to mitigate the adverse effects of AI and automation on the labour market and foster sustainable employee development. The policies of countries worldwide that promote ethical control, lifelong learning, and workforce retraining in AI applications are noteworthy as examples of national AI plans. For instance, the laws implemented by the United States, Canada, and the European Union (European Commission, 2020; U.S. Office of Science and Technology Policy, 2022). An investment in digital literacy programs, the collaboration of public and privately owned sectors, and control systems that support the responsible use of AI in the workplace are the most common elements of such frameworks.

Firms are establishing internal policies to facilitate the transition of employees through reskilling and upskilling programs at the organisational level. IBM's "New Collar" initiative, for instance, emphasises the acquisition of technical skills regardless of the completion of a four-year degree, and it provides support through the organisation's overall AI strategy (IBM, 2021). The Amazon Upskilling 2025 pledge allocates its resources to the education of more than 100,000 employees in prominent fields such as cloud computing and machine learning (Amazon, 2021). These initiatives do indeed suggest that investing in development is not only a moral imperative but also a strategic advantage that enables a business to operate effectively.

However, the efficacy of this policy is contingent upon its design and execution. Empirical data indicates that prospective reskilling programs that prioritise a single size are unable to achieve success because they are unable to satisfy the unique expectations of employees (Deming & Noray, 2023). In addition, the initial inequalities may be exacerbated by the disparities in access to training, particularly in low-skilled labour, elderly workers, and disadvantaged groups. Consequently, it is imperative to establish policy frameworks that are inclusive and equitable in order to ensure that no segment of the workforce is marginalised by technological advancements, but rather than gaining from them.

Employee development encompasses a variety of procedures, such as mentorship, training, career planning, and performance management. These procedures are crucial for the preservation of individual development and organisational prosperity. Traditional career trajectories are re-engineered, and the shelf life of skills decreases when the context is AI and automation. Thus, these processes acquire new meanings. The necessity of perpetual learning and the promotion of adaptable development methods is underscored by Deloitte (2022), which notes that it now takes less than two years to forget a skill that has been acquired.

Overall, the global labour market is awed by the AI and automation process, which necessitates a reevaluation of policies regarding career trajectories, reskilling, and training. Policymakers, organisational leaders, and scholars are required to conduct fundamental investigations regarding the implications of AI/automation policies on labour development.

The shift initiated by a new set of policies on AI and automation is acutely manifested in the digital and hybrid shifts in the population of skills. Modern workers are accused of being required to collaborate with intelligent machines, analyse information, and participate in multifunctional and group tasks. This pathway necessitates the convergence of technology and the so-called soft skills, including adaptability, communication, and leadership, to name a few. Consequently, organisations must adjust their development programs to strike a balance between the development of expertise in the field and the capacity to add to it and apply competencies that are broadly applicable to technological changes.

An additional aspect that warrants consideration is the psychological and motivational components of staff development. The anticipation of automation and displacement risk in the workplace can lead to apprehension and opposition, which can have a detrimental impact on performance and participation. To mitigate these effects, it is imperative to establish open communication regarding the function of AI and positive developmental frameworks. When employees perceive that the organisation is dedicated to their long-term development, they are more inclined to perceive change as advantageous and would serve as an invaluable asset to innovation initiatives (Bock et al., 2019).

The concept of AI and automation is, however, accompanied by a variety of obstacles that are associated with the integration of these concepts with employee development strategies. One of the outstanding issues is the inconsistency between human resource practices and the use of technology. Additionally, the majority of organisations encounter the challenge of integrating AI tools into their existing HR systems, which leads to inefficiency or dispersed learning. Additionally, the management's inability to provide long-term financing and support may be impeded by the absence of distinct profitability metrics for reskilling programs (Gartner, 2022).

The effectiveness of AI-powered learning systems is a concomitant issue. The success of personalised learning systems, which utilise AI to facilitate individual development, is contingent upon the quality of data, algorithmic bias, and the user experience. Failure to conduct a thorough assessment may result in solutions that do not align with strategic objectives or meet the needs of employees.

In spite of these threats, there are significant opportunities for the convergence of AI, automation, and employee development. In addition, AI may provide real-time feedback and predictive skill gap analytics, as well as immersiveness through the implementation of gamification and virtual reality (The Marr, 2022). Automation has the potential to alleviate the monotonous and burdensome workload of the employee, allowing them to allocate more time to more creative pursuits that necessitate innovative thinking and ingenuity. Organisations can cultivate a human resource that is future-competent, adaptable, and rapid by responsibly integrating these technologies.

In general, the hazards (or implications) of AI and automation policies with respect to the development of employees are intricate and distant. In light of the evolving work environment as a result of technological advancements and breakthroughs, stakeholders should prioritise strategies that prioritise inclusiveness, flexibility, and continuous learning. In order to achieve effective development in an AI-driven future, a comprehensive approach that integrates interdisciplinary technical training with emotional and social expertise, backed by sensible policies, would be necessary. Organisations and policymakers can ensure that employee development remains the primary focus of social advancement and organisational resilience by effectively managing current setbacks and capitalising on future breakthroughs.

**Statement of the Problem**

The traditional employment environment has been profoundly transformed by the rapid implementation of artificial intelligence (AI) and automation technology in workplace business processes, resulting in pressing concerns regarding employee development. In addition to the enterprises' adoption of these tools to enhance productivity and efficiency, empirical evidence indicates that numerous employees are experiencing difficulty in keeping pace with the evolving requirements of expertise (Brynjolfsson & McAfee, 2017). Consequently, the most recent technological revolution has resulted in the displacement of routine employment and has simultaneously generated a demand for higher-level skills in both cognitive and technical domains (World Economic Forum [WEF], 2023), necessitating exceptional developmental frameworks.

However, the policy that is currently in place regarding workforce training and reskilling is significantly out of alignment with the pace and scope of technological advancement. Numerous organisations lack a comprehensive framework to facilitate continuous learning, resulting in a skill deficit that not only undermines the competitiveness of an organisation but also undermines the careers of its employees (Deloitte, 2022). In addition, the disparity in training opportunities exacerbates inequality, particularly among under-represented individuals, elderly workers, and employees who lack skills.

Despite the existence of a few corporate-driven initiatives, including the IBM New Collar strategy and Amazon Upskilling 2025, inclusive, equitable development policies have not yet been universally institutionalised (IBM, 2021; Amazon, 2021). Bias in algorithms in AI-driven learning systems and the disparities between human-resources policies and technology implementation are additional complications that impede the proper development of the workforce (Zawacki-Richter et al., 2019).

As a result, it would be impossible to formulate effective long-term labour policies without a comprehensive understanding of the impact of AI and automation policies on employee development. In the absence of effective and inclusive policy measures, it is highly probable that the benefits of technological advancements will not be distributed equitably, and significant portions of the workforce will not adequately prepare for the future.

**Research Objectives**

To examine how AI and automation policies influence employee development in modern workplaces.

***Specific Objectives***

1. To identify the key AI and automation policies currently being implemented in organisations.
2. To assess how these policies affect employee skills, roles, and career progression.
3. To explore strategies that can enhance employee development in response to AI and automation trends.

**Research Questions**

1. What are the key AI and automation policies currently being implemented in organisations?
2. How do these policies affect employee skills, roles, and career progression?
3. What strategies can be used to enhance employee development in response to AI and automation trends?

**LITERATURE REVIEW**

**Conceptual Review**

The defining power of AI is transforming sectors, reallocating job descriptions, and reconstituting working relationships. The gradual adoption of these technologies by organisations has significant implications for human capital, with employee development being the most substantially impacted. Individual development is typically comprised of a series of activities, including training, reskilling, upskilling, mentorship, career planning, and performance management, all of which are essential for the sustained growth of an individual and the competitiveness of a company (Deloitte, 2022). Nevertheless, AI and automation introduce new complexities that cannot be resolved in the same way as they were in the past with respect to workforce development.

The conceptual review examines the developing relationship between staff development, AI, and automation policies. Initially, it delineates the technological environment that is in the process of influencing workplace transformation. The subsequent section addresses the national and organisational responses to policy. The review now concentrates on the effects on the employees' learning, the skills they acquire, and their mental health. Finally, it discusses the challenges and opportunities associated with the implementation of effective employee development strategies in the era of AI. The article concludes with future research and practice recommendations.

An indispensable agent of change in the workplace is technological advancements. In the past, artificial intelligence and automation were considered futuristic concepts; however, they are now an essential component of contemporary business strategies. This technology enables machines to perform tasks that were previously performed by human employees, including data entry, customer service, quality control, and even complex decision-making (Brynjolfsson & McAfee, 2017). According to the McKinsey Global Institute (2023), the advancements in machine learning, robotics, and natural language processing may result in the automation of up to 30% of work activities in a variety of sectors by 2030.

The emphasis in the technological sector has shifted from the replacement of labour in certain categories to the improvement of human analytical, diagnostic, strategising, and strategising capabilities as a result of the expanded capabilities of AI (Ransbotham et al., 2021). Consequently, AI is both a disruptor and an enabler, a situation that has significant implications for the professional development of employees. Although motorisation poses a threat to occupations that involve a significant amount of routine or repetitive work, it also necessitates the acquisition of new skills, including digital literacy, flexibility, and problem-solving.

Consequently, the nature of employment is undergoing a significant transformation. However, the value of intellectual and social abilities that cannot be automated is increasing (World Economic Forum [WEF], 2023). Employees are anticipated to engage in cross-functional collaboration, interpret information, and work with intelligent systems. In order to ensure that their employees remain competitive in this dynamic environment, organisations will need to reevaluate their talent development strategies.

In addition to the confrontation of the disruptive effects of AI and automation, governments and institutions are engaged in policy-making with a focus on the mitigation of negative employment consequences and the sustainability of workforce development.. National AI strategies, including those of the United States, Canada, and the European Union, prioritise the implementation of lifelong learning, reskilling programs, and ethical governance (European Commission, 2020; U.S. Office of Science and Technology Policy, 2022). These frameworks typically permit the financing of digital literacy initiatives, promote collaboration and interactions between the state and business sectors, and establish regulatory guidelines for responsible AI usage. The Digital Education Action Plan by the European Union (20212027) is an example of such a plan. Its objective is to foster digital competencies through targeted educational and training interventions. Similarly, the National Artificial Intelligence Initiative Act in the United States is anticipated to coordinate federal efforts to facilitate workforce adaptation to the changes governed by AI.

In addition, organisations are internally employing measures, including employee reskilling and upskilling programs, at the firm level. IBM's New Collar initiative, which is a component of the company's overarching strategy to complement AI integration, aims to cultivate technical proficiency regardless of the presence of four-year degrees (IBM, 2021). Amazon's Upskilling 2025 initiative is expected to provide over 100,000 employees with training in cloud computing and machine learning (Amazon, 2021). In addition, there are corporate-driven initiatives that bolster the notion of investing in the development of employees as ethically accountable and strategic to the preservation of a competitive advantage.

Nevertheless, the efficacy of these policies may vary contingent on their design and implementation. Deming and Noray (2023) have provided evidence that uniform, blanket reskilling programs would be ineffective when implemented to address the diverse requirements of employees. Furthermore, prior inequalities may be highlighted by the disparity in training opportunities, particularly among low-skilled employees, elderly individuals, and oppressed communities. Consequently, it has been imperative to establish policy frameworks that are both comprehensive and equitable in order to prevent any one segment of the workforce from feeling resentful towards the technological advancements that have been implemented.

The prevalent perceptions of employee development were predicated on a facilitative approach to training as a means of enhancing performance and career advancement. Nevertheless, the field of AI and automation is undergoing a significant transformation. The rapid obsolescence of skills underscores the necessity of developing ongoing, flexible, and personalised strategies. Deloitte (2022) reported that the half-life of skills has decreased to less than two years.

The emergence of hybrid and digital talents is another notable feature of this transformation. The employees are now required to operate with intelligent systems, necessitating their data, mental, algorithmic, and digital skills (PwC, 2023). Simultaneously, the soft skills of leadership, emotional intelligence, and creativity become increasingly important as algorithms replace the conventional roles. Therefore, it is imperative that organisations establish development programs that generate both field-specific skills and portable skills that can withstand technological changes.

In classrooms, it is important to recognise that e-learning-based platforms, virtual-reality simulations, and AI-based personalised learning systems are increasingly replacing or supplementing traditional classroom instruction (Zawacki-Richter et al., 2019). The modalities offer learner-based, flexible, and scalable options that are essential for adapting to the demands of modern contexts.

It is impossible to disregard the psychological and motivational components of development. The anxiety and Jacobianism that may result from the concern of lost employment due to automation may decrease engagement and the production rate. This issue can be mitigated through the implementation of favourable development policies and transparent communication regarding the purpose of AI. Employees who are motivated by their organisation's commitment to their long-term growth are more inclined to embrace innovation and implement changes (Bock et al., 2019).

The prospect of integrating automation and artificial intelligence (AI) into employee development strategies is in itself a significant challenge. The most significant of these is the discrepancy between the practices of technological adoption and human resource practices. Numerous organisations encounter challenges when attempting to integrate their AI tools into their existing HR system, which frequently results in fragmented or inefficient development outcomes. Additionally, there is a lack of clarity regarding the potential return on investment (ROI) of reskilling initiatives, which complicates the process of maintaining funds and securing executive support (Gartner, 2022).

Another obstacle is the assessment of the efficacy of AI-enabled learning platforms. Despite the potential of a personalised learning system propelled by AI to facilitate selective employee development, its success will be contingent upon the quality of data, algorithmic bias, and user experience (Zawacki-Richter et al., 2019). The absence of effective evaluation measures within organisations may result in the deployment of a solution that fails to meet the strategic objectives or the requirements of the employees.

Additionally, it is challenging to anticipate future skills in light of the rapid evolution of technology. In order to reconcile short-term training requirements with workforce planning, organisations must be nimble and have a long-term perspective when conducting organisational planning. Inadequate preparation can also result in a skills disparity, where employees are trained to assume roles that are subsequently rendered obsolete by the advancement of AI and automation.

However, these obstacles aside, the potential for AI and automation to be integrated into employee development is substantial. Real-time feedback, skill gap prediction analytics, and gamification and virtual reality learning engagements can all be achieved through the use of AI (Marr, 2022). Additionally, these instruments have the capacity to enhance the effectiveness of development programs by enabling learners to learn at their own pace and receive more personalised support.

Automation also has a positive impact by eliminating the repetitive nature of work and allowing employees to focus on the most valuable tasks that require creative and analytical thinking. These technologies have the potential to create a workforce that is more future-focused, durable, and agile when utilised intelligently.

In order to optimise the value of AI and automation, it is imperative that employers, educational institutions, and policymakers establish partnerships. The development of industry-recognised credentials, certification programs, and standardised curricula that are in alignment with the new and necessary expectations of the job market is one of the methods that can be implemented through public-private partnerships (WEF, 2023). Additionally, open-access platforms and micro-credentialing systems are more likely to democratise learning opportunities, thereby superseding the fact that various demographics participate in the digital economy.

It is also crucial to preserve the culture of continuous learning within organisations. Leaders should promote experimentation, provide incentives for innovative ideas, and provide opportunities for employees to develop their skills. Empowering employees to learn and develop increases the likelihood that they will remain committed and contribute to the organisation in an ever-changing world, thereby contributing to its success.

In general, the consequences of AI and automation policies on employee development are numerous and intricate. The workplace is currently being restructured by technological innovations, necessitating that institutions and policymakers concentrate on the development of strategies that are rooted in perpetual learning, change, and inclusivity. The artificial intelligence revolution's development process should be comprehensive, encompassing technical education, emotive and social skills, and a robust policy framework to facilitate it.

**Theoretical Review**

Organisations are being restructured, and the competencies required for success in the workplace are being altered by automation and artificial intelligence (AI). It is imperative to comprehend the implications of these technologies on the developmental pathways of employees, as they are implemented by companies. Key conceptual frameworks and policy models are presented in the current theoretical review, which elucidates the manner in which AI and automation initiatives moderate the learning and reskilling processes among the workforce and professional careers. The review offers a consistent analytical framework for comprehending the dynamics of the nexus between technology-oriented policies and the development of employees by examining the Human Capital Theory, the Adult Learning Theory, Technological Determinism, and the Organisational Learning Theory.

**Human Capital Theory**

The Human Capital Theory (HCT) was introduced by Becker in 1964 and posits that individuals invest in education, training, and health in order to increase their productivity and earning capacity. The application of HCT is not lost in the contemporary era of AI and automation, as it emphasises the importance of continuous learning to preserve employment capabilities. Acemoglu and Restrepo (2022) have demonstrated that technological advancement can either augment or replace human labour, depending on the extent to which workers are able to cultivate adaptive skills.

Workers must be able to continuously enhance their skills and knowledge in order to maintain their value, even in the context of modern work environments, where AI is responsible for a growing number of intricate corporate responsibilities (World Economic Forum [WEF], 2023). Companies that prioritise employee development, such as formal training programs, digital literacy initiatives, and the retention of their talent, are more adept at maintaining their competitive edge and retaining their workforce. Consequently, HCT affirms that the pursuit of reducing the deleterious effects of automation necessitates an active investment in human capital.

**Adult Learning Theory (Andragogy)**

Adult Learning Theory, or andragogy, as it is defined by Knowles (1980), investigates the unique characteristics of adult engagement with the learning process in comparison to that of children. It emphasises self-directed study, experience-driven relevance/importance, and a problem-centred approach. The development of employee interventions within AI-integrated environments is contingent upon the application of these principles.

Merriam and Bierema (2014) have observed that adult students exhibit a high level of interest in the subject matter when it is directly relevant to their professional and learning objectives. Consequently, the necessity of personalised, interactive, dynamic, and job-aligning reskilling and upskilling strategies is justified. The current AI-based adaptive learning solutions will facilitate the development of personalised content that is tailored to the specific needs and performance profiles of the user, thereby enhancing engagement and retention (Zawacki-Richter et al., 2019).

Additionally, the nature of the job is being altered by the emergence of AI and automation, which will provide adult learners with the advantages of continuous feedback and a plethora of opportunities to integrate newly acquired knowledge into their practice. These development styles are also appealing to androgynous values that prioritise relevance and hands-on learning.

**Technological Determinism**

Technological Determinism posits that societal structures and organisational behaviour are operationalised consistently, forecastable, and appear to be inextricably linked to technological artefacts (Misa, 2019). The framework presupposes that the introduction of artificial intelligence and automation into the workplace will inevitably transform employment patterns, and as a result, workforce-development strategies must be adjusted. This is translated into the professional context.

Despite the criticism that Technological Determinism diminishes the role of human agency in determining the direction of technology, the theory continues to offer a valuable heuristic for comprehending the influence that policy-making regarding the use of AI has on the development of employees. In reality, automation that lacks adequate reskilling provisions may result in employment losses rather than increased productivity, as evidenced by the widespread automation of telecommunications businesses. In contrast, the simultaneous implementation of strategic training programs and AI technologies would enhance the job satisfaction and advancement opportunities of employees.

This perspective clearly demonstrates that AI policies should incorporate ethical considerations and rigorous workforce planning activities to ensure that technological advancements benefit both employers and employees (European Commission, 2020).

**Organisational Learning Theory**

The theory of organisational learning (OLT) posits that the knowledge base of an organisation is improved through continuous innovations, purposeful reflection, and cumulative experience (Argyris & Schon, 1978). In the context of the development of artificial intelligence and automation, this framework delineated the importance of integrating flexibility and sustained learning to meet the needs of the firm.

Senge (1990) further elaborated on these principles by proposing the concept of the "learning organisation," which enables the development of synergistic knowledge, organisational vision, and system-wide perspective-taking. It is impossible to manage employee development in a technology-driven environment without the implementation of such mechanisms. Deloitte (2022) has observed that business organisations that have successfully implemented OLT concepts are better equipped to support the transition of employees who are at risk of technological automation, instigate knowledge transfer, and implement effective reskilling strategies.

Additionally, OLT posits that learning is not solely designed to acquire new skills, but also to relinquish antiquated practices and learn new aspects of the job that emerge. The significance of unlearning is particularly relevant in industries that are rapidly reorganising following the introduction of AI (Ransbotham et al., 2021). Consequently, in order to ensure the long-term development of employees, organisations should establish environments that encourage experimentation, feedback, and the iterative process of improvement.

**Social Cognitive Theory**

The Social Cognitive Theory (SCT) proposed by Bandura posits that human behaviour is influenced by three factors: self-efficacy, observational learning, and environmental influence. SCT can be employed to elucidate the manner in which employees respond to technological transformation and how these responses can be mitigated in the contemporary work environment, where AI and automation have taken a dominant role.

Bandura (1997) asserts that individuals are more likely to engage in the learning process when they perceive a likelihood of success (self-efficacy), which is the cornerstone of SCT. The principle posits that employees who are dubious about the potential to adapt in an AI-saturated workplace may opt to oppose the changes or refrain from learning. Consequently, in order to achieve desirable developmental outcomes, it is essential to establish a structured system of mentorship, assistance, and increasing skill challenges.

SCT also places a particular emphasis on the mechanisms of modelling and vicarious learning, which involve employees observing their peers successfully employ AI tools and procedures. Thus, it is incumbent upon leaders and trainers to demonstrate the value of lifelong learning and the psychosocial environment that facilitates its advancement (Gagne and Deci, 2005).

The review available has provided a concise summary of the primary theoretical frameworks that influence our understanding of employee development in the context of AI and automation. The Human Capital Theory elucidates the economic rationale behind the consistent investment in skills; the Adult Learning Theory defines the development of successful, learner-focused training programs; the Technological Determinism aids in the identification of the structural changes that arise as a result of AI implementation; the Organisational Learning Theory emphasises the adaptability of an institution; and the Social Cognitive Theory elucidates the mental and motional influences that shape employee attitudes towards emerging technologies. Collectively, these perspectives establish a robust conceptual framework for comprehending the intricacy of employee development in the AI era. Future research should concentrate on the practical frameworks that can be established to guide policy creation, company planning, and future workforce management, based on this theoretical knowledge.

**Empirical Review**

The integration of automation technologies and artificial intelligence (AI) into contemporary work environments has become a fundamental characteristic of contemporary economies. The flux of workers, organisational practices, and occupational designs has been significantly altered by these technologies. A burgeoning corpus of empirical research has focused on the impact of AI and automation on employee development, with a particular emphasis on the role of reskilling, upskilling, job satisfaction, and career progression. New knowledge is summarised in the present review by emphasising the potential impact of AI and automation policies on employee development outcomes.

Empirical research consistently indicates that AI and automation necessitate substantial investments in reskilling and upskilling programs to ensure that the workforce remains competitive. Certain discoveries are instructive. According to the McKinsey Global Institute (2023), technological advancements will necessitate the reskilling of nearly 40% of the workforce within the next six months. This discovery is in accordance with Deloitte (2022), which asserts that organisations that implement consistent development initiatives exhibit superior retention and improvement rates.

PwC (2023) conducted a survey that revealed that 79% of employees believe that digital skills are essential for the advancement of their careers. However, only 44% of employees are adequately educated and equipped to meet the demands of modernity. This results in a skill disparity that can be addressed through the implementation of policy responses that will optimise skills. IBM's New Collar program, which prepares employees who lack conventional four-year degrees in the fields of AI and cloud computing, has yielded quantifiable workforce-ready outcomes (IBM, 2021).

In the same vein, Amazon's Upskilling 2025 initiative, which sought to train more than 100,000 employees in high-demand fields such as robotics and machine learning, serves as a clear illustration of the strong correlation between the training provided by an employer and the satisfaction and mobility of its employees (Amazon, 2021). These case studies demonstrate that proactive reskilling strategies are likely to mitigate the risk of job displacement while simultaneously aligning with potential long-term career opportunities.

Empirical studies also indicate that AI and automation are reshaping the workforce, necessitating that employees adapt to new roles and competencies. The significance of active career development models is underscored by the assertion that 65% of children who are currently enrolled in primary school will ultimately hold jobs that are currently only available in science fiction, as per a longitudinal study conducted by the World Economic Forum (WEF, 2023).

Automation has transformed labour patterns in the manufacturing sector, resulting in a shift towards supervisory and analytical roles, where individuals are no longer classified as labourers. Bessen (2019) conducted an analysis of the textile industry's automation and concluded that, despite the elimination of certain jobs that required less skill, new positions emerged that necessitated technical proficiency, computer literacy, and problem-solving abilities. There was a higher likelihood of successful advancement to these positions among employees who received specialised training.

The service industry has undergone a revolution in customer service positions as a result of chatbots that are powered by AI and customer analytics solutions. Ransbotham et al. (2021) demonstrated that employees who work in the call centre and rely on AI for decision-making manifest a higher level of job satisfaction and organisational value. Conversely, employees who are inadequately trained express feelings of frustration and redundancy.

The aforementioned findings substantiate the hypothesis that AI and automation do not inherently result in mass unemployment, but rather, they facilitate job transitions. Therefore, adequate policies regarding employee development should equip employees with the necessary skills to thrive, rather than replacing human labour with machinery.

In addition to acquiring technical skills, empirical research that focuses on the psychological aspect indicates that employees are concerned about automation and AI. The most prevalent emotional responses to technological transitions are fear of change, inquisition about their relevance, and fear of job loss.

In a meta-analysis study conducted by Gagne and Deci (2005), the researchers discovered that intrinsic motivation, which is associated with the concepts of autonomy, competence, and relatedness, is a critical factor in the successful adaptation to new technologies. The transition and level of engagement will be more seamless when an organisation adopts a positive culture of learning, effectively communicates information regarding AI adoption, and does not disregard the input of employees.

The authors conducted a study on the issue of AI implementation in financial services companies and found that employees who perceived investments by their organisation in their growth were more adaptable to the new conditions and contributed to the company's innovation activities. In contrast, employees who did not feel valued or ignored displayed higher turnover intentions and lower morale (Bock et al. 2019). By virtue of these discoveries, it is prudent to evaluate motivational and emotive variables during employee development.

Research has demonstrated the effectiveness of strategic workforce planning as a method of transformation management by AI at the organisational level. Organisations that coordinate the effort to align talent management practices with the strategy of adopting new technologies experience an increase in organisational performance and employee retention, as demonstrated by Sandeepanie et al. (2024). Particularly, organisations that implement personalised developmental strategies and employ data analytics to identify areas in which their workforce is deficient achieve superior outcomes.

The outcomes of employee development are also significantly influenced by government policies. Bonoli (2021) analyses national rehabilitation programs in a handful of European countries and determines that comprehensive lifelong-learning policies, which are founded on governmental investment and collaboration with the private sector, are more effective in mitigating the employment risks associated with automation.

For instance, in Singapore, SkillsFuture is a program that encourages employers to provide their employees with training and financial support for adult education. The Ministry of Education (2022) conducted a review that indicates that participants exhibit a higher rate of employability and career upward mobility than non-participants.

Nevertheless, there are still discrepancies in the availability of training resources. Deming and Noray (2023) demonstrate that disparities are created as a result of the increased number of constraints that low-earning employees and elderly employees face in accessing reskilling opportunities. The policy interventions must be diverse in order to ensure that all members of the working class benefit from this technological advancement.

Empirical studies identify certain impediments to the effective implementation of AI and automation policies, despite the fact that they bolster progress. The lack of alignment between human resource practices and the adoption of technology is a significant issue. The majority of organisations are unable to integrate AI tools into their existing HR software, resulting in development results that are either inadequately developed or incoherent.

In general, contemporary economies are characterised by the implementation of AI and automation in the workplace. The manner in which organisations operate, are organised, and interact with their employees has been significantly altered by these technological advancements. Empirical research indicates that the workforce's competitiveness is significantly impacted by AI and automation, necessitating an emphasis on reskilling and upskilling. Employees utilise more structured and formal policy interventions, including intrinsic motivation-guided learning environments, participatory decision-making, and open communication, as a strategy for managing technological transitions. At the heart of the matter are publicly funded, inclusive, lifelong-learning programs and organisational strategic workforce planning, which will enable the development of extended careers and resilience. The necessity of developing equitable policies is emphasised by the long-standing disparities in equal access to opportunities for reskilling. Nevertheless, the most recent research suggests that the likelihood of AI and automation triggering

Up to this point, empirical evidence indicates that reskilling programs do not consistently generate evident returns on investment (ROI). Consequently, it is more difficult to obtain additional financial support or secure the backing of executive management (Gartner,2022). In the absence of a streamlined set of assessment processes and clear performance metrics, organisations are more likely to implement interventions that fail to address the training requirements of employees and the broader strategic objectives.

An additional constraint pertains to the assessment of AI-powered learning platforms. In this manner, the potential of AI-powered personalised learning systems presents advantageous opportunities for personal employee development; however, these platforms operate relatively efficiently in terms of algorithmic bias, data quality, and user experience (Zawacki-Richter et al., 2019). Organisations are susceptible to the risk of implementing solutions that do not effectively meet the requirements of their employees or achieve organisational and employee objectives in the absence of a thorough assessment.

Empirical research consistently demonstrates that AI and automation policies continue to have a drastic effect on staff development. The motivation and mental health of employees, as well as the redesign of employment and careers, are all influenced by these technologies, which also drive unending reskilling and upskilling. To ensure the effective implementation of AI-related policies throughout the workforce, it is necessary to strategically align the adoption of the most recent technologies with the development of human resources.

There is also evidence that suggests that the retention of organisational talent and competitiveness are significantly enhanced by the implementation of developmental plans, open communication, and systematic skill development. The significance of guaranteeing that these technological advancements have a broader, positive impact on the workforce is that parallel government policies, the promotion of lifelong learning, and the equitable provision of training resources are necessary.

The results analysed in the present paper provide a solid foundation for the development of high-quality employee development programs in the era of AI and automation, despite the fact that there are still issues related to implementation, measures, and inclusiveness.

**METHODOLOGY**

The study employs a qualitative research design to explore the impact of AI and automation policies on employee development. It is particularly appropriate to address this subject through qualitative research, as it allows for a more profound understanding of the intricate phenomenon, such as the influence of technological advancements on the workforce's acquisition of skills and strategies employed by a variety of enterprises. Qualitative research is more appropriate for the examination of policy implications and human resource practices in the dynamic environment of AI and automation, as it is based on meanings, experiences, and interpretations, in contrast to quantitative research that is based on numbers and statistical results.

The study design will be contingent upon a documentary analytic approach, which involves the systematic examination of available materials in the form of texts. The selection of a secondary method of data collection, rather than a primary method (interview or survey), was influenced by the fact that the research topic involves the analysis of policies, reports, case studies, and academic literature that are dedicated to the issues of AI, automation, and employee development. This approach will not only ensure the availability of a wide range of credible and authoritative sources, but it will also facilitate the comparison of a diverse array of industries, regions, and organisational settings.

The information was collected from a wide range of secondary sources, including government publications, industry white papers, corporate reports, and documents from international organisations such as the World Economic Forum, McKinsey & Company, and the International Labour Organisation. These resources were selected based on their correlation with the policies of AI and automation, the workforce developmental policies, and the evolving trends resulting from the new nature of work in technologically advanced workplaces. The inclusion criteria also prioritised recent publications (published between 2015 and 2025) in order to provide a sense of the current trends and developments within the research field.

Several significant themes were identified and investigated during the data collection process, including the reskilling initiative, job displacement issue, digital transformation plan, and policy framework. The thematic literature review was employed as the data collection method. By employing online academic databases such as Google Scholar, Science Direct, JSTOR, and ProQuest, an effort was made to identify pertinent studies. Additionally, the websites of significant international organisations and companies that develop technology products were examined to gather information about the implementation of policies and practices in real-world scenarios.

A thematic analysis method was employed to identify patterns, ideas that tend to recur, and significant discoveries in the data that was collected. Such an approach enabled the classification of information according to critical topics, including the role of policy in workforce adaptation, the challenges employees face in adapting to new technologies, and the most effective strategies to employ in the process of fostering employee development in a work environment that incorporates AI. Thematic coding was conducted manually by utilising a framework that was developed in accordance with the research questions and conceptual underpinnings of the study.

The qualitative results' quality and credibility were established through triangulation, which involves the verification of the findings by consulting multiple sources of information to ensure that they are consistent and not influenced by individual sources. Furthermore, the researcher was reflective during the analysis phase of the study, ensuring that any interpretation was based on the observations discovered in secondary sources and was objective.

The research process also took into account ethical considerations. Despite the fact that the study was not conducted on human subjects, it adhered to all ethical standards, including the citation of the work, the reference to the original author, and the preservation of intellectual property. The analysis was conducted with academic integrity in mind, as all sources were properly referenced in accordance with the APA 7th edition format.

In summary, this is a qualitative research project that employs a thematic analysis and a secondary data collection method to investigate the impact of AI and automation policies on employee development. The study provides a more detailed and nuanced understanding of the threats and opportunities associated with the transformation of the workforce in the era of smart technologies, as a result of the extensive use of authoritative sources.

**DATA ANALYSIS**

The qualitative data collected through secondary sources reveals several significant themes regarding the impact of the AI and automation policy on the development of employees. The themes include the usefulness of organisational and policy-level measures, psychological impacts on workers, reskilling and upskilling, and transformations in employment. Thematic classification was employed to identify each theme, and evidence to support each theme was sourced from academic literature, industry reports, and policy documents.

**1. Transformation of Job Roles**

The most recent empirical research consistently demonstrates that AI and automation are revolutionising conventional employment patterns. The McKinsey Global Institute's most recent report indicates that approximately 30% of all labour in a variety of industry sectors can be automated by 2030. This is expected to result in a significant reorganisation of job categories (McKinsey Global Institute, 2023). The demand for manual labour has decreased in areas where repetitive manual labour is present, such as the manufacturing/customer service areas and the financial sector. However, the need for technical and analytical skills has increased. An illustration of a case study is the operation of Amazon warehouses, where the integration of such technologies has even resulted in the creation of new job positions, such as robot maintenance technicians or data analysts, who are responsible for reshaping the efficiency of work. Consequently, it is evident that, rather than resulting in the general replacement of jobs, AI and automation frequently inspire the development of existing ones (Amazon, 2021). Subsequently, the contemporary progression of labour relations necessitates an equivalent adjustment to the labour force's competencies.

**2. Importance of Upskilling and Reskilling**

The necessity of long-term learning programs to assist employees in navigating technological disruption has been repeatedly demonstrated by comprehensive empirical studies. According to a survey conducted by Deloitte in 2022, 70% of employees believe that they must acquire new skills annually to remain competitive. In response, IBM and other organisations have instituted strategic programs. The most recent of these programs is the "New Collar" initiative, which directs the development of employees without traditional college education to acquire digital and technical skills (IBM, 2021). In the same vein, PwC (2023) reports that organisations that implement systematic upskilling initiatives experience significantly elevated retention rates and improved employee performance. Nevertheless, the current reskilling initiatives are not as comprehensive as they could be, as there are substantial disparities in access to these opportunities among low-income earners and senior workers.

**3. Psychological and Motivational Consequences**

The emotive implications of AI implementation are a pertinent issue, in addition to the skill requirement issues. As per empirical evidence, anxiety and resistance to change may be induced by situations of uncertainty regarding job retention and fear of redundancy. This assertion is corroborated by the meta-analysis conducted by Gagne and Deci (2005), which underscores the significance of intrinsic motivation as a facilitator of successful adaptation to a new technology. Employees are more likely to embrace the change if they believe that their employer prioritises their growth and offers them high-quality development opportunities. Bock et al. (2019) demonstrate to a larger extent the importance of recognising employee input and maintaining open lines of communication regarding the implementation of AI in order to maintain morale and engagement during a technological transition.

**4. Interventions at the organisational and policy levels**

The successful implementation of varied AI-related policies within an organisation is significantly contingent upon the alignment of technology adoption and personnel strategies. Sandeepanie et al. (2024) have demonstrated that enterprises achieve superior workforce outcomes when they integrate automation and talent management practices. A few of the most notable examples are the internal mobility program at Google and the AI School at Microsoft, which provide free online courses to assist employees in acquiring pertinent digital skills. The SkillsFuture project in Singapore is an example of a public-private game and program that can be referenced at the national level. This initiative demonstrates how governmental-run programs can improve lifelong learning and mitigate the risk of unemployment as a result of heightened automation (Ministry of Education, Singapore, 2022). Deming and Noray (2023) nevertheless warn that the current form of inequality may be perpetuated if there is no specific support mechanism in place for marginalised groups of workers.

**5. Obstacles to Implementation**

A constellation of challenges has emerged in the effective implementation of employee development strategies in response to AI and automation, despite the emergence of encouraging new forms. The discrepancy between the utilisation of technology and human resources is one of the primary concerns. The integration of AI tools into an organisation has been a challenge, as the majority of organisations lack the ability to easily integrate the tools into their existing training systems. Consequently, the development outcome is fragmented or otherwise ineffective. The current lack of a clear understanding of the return on investment (ROI) of reskilling programs is equally significant, as it is in direct opposition to the long-term funding and buy-in of executives (Gartner, 2022). Additionally, algorithmic discrimination and data constraints are issues in AI-driven learning systems, which contribute to disparities in the availability of development opportunities (Zawacki-Richter et al., 2019).

**Summary of Findings**

The comprehensive examination of the most recent data suggests that the policies of AI and automation have significant implications for the development of employees. On the one hand, these technologies necessitate perpetual reskilling and replicate the current job characteristics. On the other hand, they generate mental and behavioural pressures. Therefore, effective employee development strategies necessitate a coordinated effort at the organisational and policy levels and should be founded on the principles of universality, transparency, and long-term vision. The following sections contextualise the study within broader theoretical discourses and offer a framework for future research and practice, based on these findings.

**CONCLUSION**

The modern workplace has been significantly altered by the recent influx of artificial intelligence (AI) and automation into the job market, which has altered the employment structures, occupational types, and even talent requirements. The subsequent paper concentrates on the examination of the organisational and national policy models that pertain to AI and automation, as well as their influence on employee development. Data sources include research literature, industry reports, and policy documents. It has been discovered that AI and automation generate substantial new challenges regarding the displacement of the current workforce, retraining/reskilling, and psychological adaptation, in addition to the anticipated efficiency and innovation advantages. In conclusion, AI and automation do not directly replace positions; rather, they alter the definition of the role. Due to the transfer of numerous menial duties to technology platforms, individuals have been compelled to cultivate their communication, critical thinking, and digital literacy abilities. Nevertheless, disparities in training accessibility jeopardise pre-existing disparities of disadvantage, particularly for workers in low-fluent occupations, the elderly, and minorities. Additionally, the psychological response, including apprehension regarding job loss and reluctance to adopt new technologies, can impede the advancement of the transitions unless it is a recognised good practice.

In this regard, successful employee development necessitates strategic alignment between human resource management and technology adoption. Companies that engage in active learning, open communication, and developable development internally demonstrate a greater ability to retain their talent and innovate. Simultaneously, the outcome of all levels of the labour force benefiting from technological advancement is contingent upon government initiatives such as the establishment of public-private partnerships and the facilitation of lifelong learning.

In conclusion, the efficacy of AI and automation will be contingent upon the capacity of organisations and policymakers to foster their growth by emphasising employee development, despite their transformative potential. The development of a workforce that is future-ready, resilient, and flexible necessitates an all-inclusive approach that integrates technical education, emotional support, and motivational support.

**Recommendations**

1. Implementing targeted reskilling interventions: Organisations should develop customised upskilling strategies that correspond with specific employment transitions that have arisen as a result of automation and AI.
2. Promoting inclusive accessibility of training: encourage the accessibility of learning opportunities for all employees, including those with low income, geriatric, and low representation in the workplace.
3. Integrating AI tools with HR Systems: In order to facilitate sustainable employee development, it is imperative that the implementation of AI tools be integrated with existing HR programs, rather than disrupting training programs.
4. Development of soft skills: In addition to the acquisition of technical skills, it is crucial to receive training in the areas of leadership, emotional intelligence, and creativity to enhance the capabilities of AI.
5. Encouraging lifelong learning: Encourage your employees to continue their education by providing them with mentorship, microlearning, and incentives for the acquisition of new skills.
6. Strengthening partnerships between government and industry: The two entities should collaborate to establish uniform training and certification frameworks for emerging occupations.
7. The implementation of open communication practices: To mitigate apprehension and resistance, employees should be informed of the intentions to implement artificial intelligence and the potential for life-sequence continuation.
8. Assessing the Return on Investment (ROI) of reskilling programs: Establish concrete metrics for comparing the performance levels of employees who have participated in the program with the ROI results on the program's cost.
9. Facilitating psychological adjustment: This would entail providing employees with mental support, including the provision of the most effective mental health resources, coaching programs, and any other form of motivation-based assistance, to reassure them in managing the technological transition.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

Option 2:

Author(s) hereby declare that generative AI technologies such as Large Language Models, etc. have been used during the writing or editing of manuscripts. This explanation will include the name, version, model, and source of the generative AI technology and as well as all input prompts provided to the generative AI technology

Details of the AI usage are given below:

1.

2.

3.

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