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Human–AI Collaboration and Intelligent Automation: The Role of AI Readiness and Digital Skills

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ABSTRACT:

Artificial Intelligence (AI) is rapidly progressing and it has changed the way organizations function. Artificial Intelligence (AI) has completely revolutionized the way organizations operate, providing intelligent automation and new ways to collaborate with intelligent systems. The effectiveness of using AI-powered technologies then, however, relies as much on the readiness of the employees and organizations to adapt to and work alongside AI as it does on the technology itself. This research aimed to examine how AI readiness and digital skills are contributing to human-AI partnerships and intelligent automation in the workplace. The qualitative multiple case study design was used to analyze organizations that had implemented AI related automation technologies. The selection of multiple organizations was done by purposive sampling and the data were gathered from semi-structured interviews with employees, managers, information technology specialists, and AI implementation professionals. Data triangulation was also complemented by examining organizational documents and AI implementation reports. The collected data were analysed by thematic and cross-case analysis to find out similarities and differences among the selected organisations. The study examined organizational readiness for AI adoption, employee digital readiness, adaptation to AI systems, and how to build effective human–AI collaboration. The results helped gain a better understanding of Human and Organizational Factors related to Intelligent Automation. The researchers emphasized the importance of AI readiness and digital skills in building trust, enhancing employee adaptability, enabling employees to collaborate meaningfully with AI systems and successfully adopt intelligent automation. This research provided practical guidance for organizational leaders and managers aiming to implement policies that focus on the human component to adopt AI and transform their workforce.

Keywords: human–AI collaboration, intelligent automation, AI readiness, digital skills, artificial intelligence, organizational transformation.

INTRODUCTION

Artificial Intelligence (AI) is one of the most impactful technological advancements of today's organizations. The growing adoption of sophisticated algorithms, machine learning systems, natural

language processing, computer vision, and generative AI allows companies to streamline complex tasks and reimagine standard workflows. The shift to intelligent automation is marked by the addition of cognitive, decision-making, analysis, prediction, communication, and adaptation tasks which are typically done by humans but now performed by intelligent automation (Davenport & Ronanki, 2018). The consequences of AI for the organization go beyond the technological aspects and are increasingly accompanied by changes that affect employees' roles, management processes, skills, and ways of working together.

With the development of AI-powered technologies, AI automation has emerged as a combination of AI and automation technologies to enhance the performance of organizational processes. Intelligent automation can process data, detect patterns, make recommendations and autonomously carry out tasks to different degrees. To this end, companies have embraced AI-powered solutions in various fields, including knowledge-based work, human resource management, manufacturing, finance, healthcare, and customer service (Jarrahi, 2018). But the success of intelligent automation is not solely reliant on the technology of the AI systems. It also relies on the human workers' ability to understand, monitor, utilize and work with these technologies.

Human–AI collaboration has become a key method to grasp how humans and AI systems work together. Researchers are starting to see that AI and people have different but complementary abilities, not that AI is just a replacement for people to work. Unlike AI systems, which can handle vast amounts of data, identify patterns and execute computational tasks quickly, humans bring their own contextual understanding, ethical judgment, creativity, emotional intelligence, and complex problem-solving abilities. (Shrestha et al., 2019) When these capabilities work together, they can yield results that neither man nor machine can achieve alone.

The idea of human–AI collaboration is significant because AI is not about replacing jobs, it is about changing the way jobs are done. For many jobs, the roles are being reconfigured as the employee interacts with AI systems to make decisions, carry out tasks, rate recommendations and solve organizational challenges. Brynjolfsson and McAfee (2014) discussed how digital technologies could augment human skills to yield new ways of productivity and innovation. Likewise, as cited by Wilson and Daugherty (2018), the future of the job will be more about collaborative interaction between the individual and smart technologies, and not about human replacement and automation.

Organizational readiness is essential for successful development of human–AI collaboration. AI readiness, defined as a combination of technological, structural, cultural and human factors, is the degree to which an organization and its staff are equipped to leverage AI enabled technologies. The organizations should create an appropriate digital infrastructure, formulate appropriate strategies, ensure data availability and prepare staff for changes related to the implementation of AI. If they are not ready, then organizations might invest in cutting-edge technology without realizing any benefits in terms of performance or productivity (Bughin et al., 2018).

Psychological and behavioural preparedness of employees is also a part of AI readiness. The implementation of AI may raise concerns about job security, evolving roles, skill needs, and the dependence on automated systems. Employees are likely to oppose AI technologies if they view them as threatening, hard to understand, or incompatible with current work methods. Individual perceptions of usefulness, ease of use, and readiness have been consistently shown to have an impact on the acceptance of technological innovations (Venkatesh et al., 2003). Therefore, it is vital to attend to employees' attitude and adaptability to new technological environments when implementing AI in organizations.

Digital skills is another important aspect of effective human–AI collaboration. The digitalization of work has led to a need for staff who are able to use digital tools, understand information, find solutions to technological problems and adapt to constantly changing technological systems. According to Van Laar et al., (2017), digital skills consist of a wide range of technical, information-related,

communication and problem-solving skills that are needed in today's digital world. For AI, workers need to be able to comprehend AI-generated content, critically consider algorithmic suggestions, and make informed choices based on AI-generated data.

As AI tools have become more accessible for users from various job roles, digital skills have become more important. AI tools of today are not limited to the technical experts and can now be used to help with communication, content creation, data analysis, customer engagement, and administrative duties. But having access to AI doesn't guarantee that it will be used properly. It is important that employees develop the necessary level of digital competence to be able to interact with these systems, understand their limitations and be aware of situations where human judgment is still required. Technological change causes job skills demands to shift, as Autor (2015) pointed out, and technological change can affect job tasks as well as workers' roles, as Acemoglu and Restrepo (2019) noted.

Trust in intelligent systems also plays a vital role in human–AI collaboration. When workers feel confident in the reliability of AI, understand its functionality, and find it valuable, they are more likely to use it. Too much trust can cause overreliance on the automated suggestions while too little can mean rejection of potentially useful technology. In a study by Glikson and Woolley (2020), they showed that trust toward AI is driven by cognitive and emotional factors, such as perceived competence and transparency and being human-like. Thus, organisations need to train workers to trust the intelligent systems, but not necessarily in an unconditional way.

There is a potential for developing AI readiness and digital skills to enable employees to build more balanced and effective relationships with AI technologies. Higher digital skill scores could help employees grasp the functioning of intelligent systems and assess AI-generated results. Likewise, AI-enabled organizations can offer training, technological assistance, leadership, and organizational frameworks that can decrease uncertainty and ease staff transitioning. These circumstances can foster an attitude that sees AI as a team player and not solely a job competitor.

Intelligent automation also poses some interesting questions about how tasks are distributed between humans and machines. To be effective, automation needs to be based on tasks that can be automated with AI, and tasks that must be performed by humans or with human oversight or judgment. The use of AI can often be interpreted as a process of supporting human intelligence, rather than merely supplanting it (Jarrahi, 2018). Human intervention is especially crucial in situations that call for contextual awareness, ethics, creativity, and accountability.

The design of work systems where both humans and machines can be effectively integrated is therefore a challenge to the organizations. The challenge is one that requires technology, job redesign, employee training, leadership and organizational culture. Raisch and Krakowski (2021) noted that organizations need to be aware of the automation–augmentation paradox, in which an organization can automate some work but still augment human capabilities. The challenge for organizations is how to integrate the various alternatives to get better results, without sacrificing the value of human expertise.

Digital transformation has also made the development of organizations' abilities more critical. Often, AI implementation is integrated into larger digital transformation efforts that include process, structure and strategy changes. Vial (2019) has defined digital transformation as a process in which digital technologies cause important changes in the properties of organizations. Implementing AI is therefore not a one-off technological occurrence. It calls for organizations to create resources, skills and management practices that complement it.

HR leaders can significantly influence the organization's readiness for AI and the adaptation of employees. Leaders need to explain the rationale behind implementing AI, mitigate concerns, offer training and development, and foster a culture of responsible innovation with new tools. The role of strategic leadership is to shape how employees think about AI, whether as a chance for growth or as a cause for anxiety in the organization. Mikalef and Gupta (2021) also pointed out that organisational

resources and organisational dynamic capabilities play a significant role in moving investments in AI to create business value.

While there is increasing interest in AI usage, many barriers exist in the journey of moving these technology investments into a viable, human–AI partnership. Some organisations have cutting edge technologies, but don't have the necessary staff to operate them. Others may have the right employee who is skilled at digital, but lack strategic readiness, organizational support for implementing AI. These difficulties show that one should think of AI readiness and digital skills together and not as separate.

Prior research has tended to be technical in nature or concerned with the implications of automation for jobs. But more understanding is needed about how employees are adapting to AI and establishing collaborative relationships with intelligent systems in the organizational processes. When people do not feel that AI systems have some human features that they need, or when they fear that AI is competing with their roles, they can develop resistance to it, as Longoni et al. showed in 2019. It is crucial to comprehend these reactions when designing more successful approaches to intelligent automation.

A qualitative approach is especially useful in studying these issues, as human–AI interaction can involve experiences and perceptions that can't be adequately captured by quantitative measures, organizational practices, and the contextual differences. There can be multiple organizations that use the same AI technologies and have varying results, due to variation in leadership, organizational culture, workforce capabilities and implementation approaches. A cross-case exploration can therefore offer a better understanding of the relationship between AI readiness and digital skills and how they affect intelligent automation process.

This research experiment aimed to understand the contribution of AI readiness and digital skills in human–AI collaboration and intelligent automation in organisational contexts. The study aimed to explore the experiences of employees, managers, information technology (IT) specialists, and professionals involved with the implementation of AI, to gain insight into how organizations have prepared their employees to engage with AI, how employees have acquired the skills needed to work with intelligent systems, and how these elements affected their collaborative interactions with AI. The study added to the body of work on AI-driven transformation in organizations, highlighting the need to focus on human capability as well as the technology.

LITERATURE REVIEW

Human–AI Collaboration

Human–AI collaboration is the interaction between human intelligence and artificial intelligence for the purpose of completing tasks, resolving issues, and aiding in decision making. Unlike traditional automation scenarios, the evolution of AI has brought the focus to working together by integrating human and machine strengths. While AI systems excel at repetitive computational tasks, data processing, pattern recognition, prediction, and social understanding, humans have the ability to engage in contextual reasoning, creativity, ethical judgment, and social understanding (Dellermann et al., 2019).

Jarrahi (2018) stated that AI technologies can aid, instead of supplant, the human decision-making process. AI systems can ingest massive amounts of data and give recommendations, and humans can understand those recommendations in the context of the organization and society. This relationship is of special significance when uncertainty, complexity and lack of information are present. While automated systems have their own limitations, the human element can complement these, whereas AI can help with the mental strain caused by the analysis of vast quantities of data.

Based on the distribution of decision-making responsibility between humans and intelligent systems, Shrestha et al. (2019) suggest that human–AI collaboration be viewed in terms of who makes what decisions. AI can function as a complementary tool, a collaborative partner or a decision-making system.

Organizations need to establish clear responsibilities and appropriate levels of human oversight, therefore, to make effective collaboration.

Human–AI collaboration also has to do with the augmentation of value. They noted an AI automation/augmentation paradox exists, as AI can replace and amplify human work, as explained by Raisch and Krakowski (2021). AI can augment human creativity, analysis, and decision-making to automate routine and predictable tasks for organizations. This viewpoint argues that the impact of technological change cannot solely be considered in terms of job loss, but also in terms of how jobs will be changed.

But, employees need to build trust in AI systems to achieve successful collaboration. Glikson and Woolley (2020) found that trust is an important component of human reactions to AI. The working staff should view intelligent systems as competent and reliable, yet there should be an understanding of the limitations of AI to enable appropriate trust. Relying on automated recommendations too much can pose risks if employees aren't trained to question inaccurate recommendations. Over-reliance on automated recommendation may present risks if employees are not trained to question inaccurate recommendations. Trust and evaluation are thus essential for effective human–AI collaboration.

Intelligent Automation and Organizational Transformation

The scope of traditional automation has been extended with the involvement of AI in the processes of an organization, thus creating a new concept of intelligent automation. Together with machine learning, natural language processing, and other artificial intelligence capabilities, RPA and traditional automation have become more complex. Davenport and Ronanki (2018) found process automation, cognitive insight, and cognitive engagement as significant value creation areas for AI in organizations.

Intelligent automation can help increase efficiency by saving time on repetitive and information-rich tasks. Its organizational effects go beyond productivity though. Implementing AI can revolutionise communication, roles, decision-making and organizational processes. Vial (2019) suggested that digital transformation brings about a fundamental change in the property of organisations and in the nature of business processes. Therefore, it is important to see intelligent automation as a means of transforming the organization.

Brynjolfsson and McAfee (2014) pointed out that the sophistication of digital technologies offers opportunities for organizations to reframe how work is done and how value is created. By the same token, Wilson and Daugherty (2018) proposed that AI will create new types of jobs focused on training, explaining, and maintaining intelligent systems. As AI technologies enter the workplace, employees may then be asked to take on new duties.

Automation affects different occupations and industries differently. Autor (2015) noted that automation often reshapes a given job function, but not a job type. Acemoglu and Restrepo (2019) also showed that automation has a displacement effect as well as a productivity effect on employment. Such views suggest that intelligent automation may create problems or opportunities for workers, depending on the way future organizations restructure their work to make room for smart automation capabilities.

AI Readiness

AI readiness is a measure of an organization and its employees' preparedness to accept and implement AI technologies successfully. Technological infrastructure, data quality, strategic direction, leadership support, employee acceptance, and appropriate skills are examples of organizational readiness. Mikalef and Gupta (2021) have shown that in organizations with complementary organizational resources and dynamic capabilities, AI capabilities can be expected to help organizations in their performance.

The preparedness of the employees is also a crucial point, as the use of AI technologies can involve changes in work routines and decision-making. Adoption studies on technology indicate that people are more inclined to adopt new systems if they believe that the systems are helpful and easy to use. Venkatesh et al. (2003) have developed a unified theory of acceptance and use of technology that emphasizes performance expectancy, effort expectancy, social influence, and facilitating conditions as factors that influence technology use.

Another key aspect of AI readiness is to build organizations' trust and acceptance. When employees feel it's going to take over their job or get rid of their job, or even take away their expertise, they can come up against resistance to the use of AI. When people don't think that machines can offer human attributes they need for a particular task, they might not accept AI-based decision making, according to the researchers Longoni et al. (2019). Therefore, organisations have to communicate, train, involve and lead employees in response to their concerns.

In a study titled "How to Make AI Add Value to Your Business," Bughin et al., (2018) highlighted that organizations that are successful in generating value out of AI tend to build greater organizational capabilities and more effective implementation practices. The use of AI demands that organizations go beyond experimentation and create the system needed to promote widespread adoption. AI readiness can thus be seen as a multicomponential phenomenon that entails technological readiness and human readiness.

Digital Skills in an Age of Artificial Intelligence (AI)

Digital skills are now crucial for functioning in the modern world of work. Van Laar et al., (2017) have defined a variety of digital skills such as information management, communication, collaboration, creativity, critical thinking, and problem-solving. These skills help workers to effectively leverage digital technology and adjust to new technology needs.

Digital skills are more than just operating software, especially in AI-driven workplaces. As employees become more responsible for engaging with intelligent systems, interpreting information generated by them, assessing automated recommendations and identifying limitations, they need to become more familiar with these processes. Those who have poor digital skills can find it hard to keep up with intelligent automation, limiting the value that organizations can gain from their technology investments.

In view of the impact of AI and automation, the skills required in the future are increasingly those related to technology, complex problem-solving and adaptation (OECD, 2019). The World Economic Forum (2023) also deemed technological literacy and AI-related skills as growingly relevant future skills for the future workforce. The current trends indicate that investing in employee learning is a constant process, not a one-off event.

Digital skills have the potential to impact work confidence and cooperation with AI. Staff with a knowledge of digital tools might better be able to assess the work produced by AI and utilise the automated tools. The opposite, however, is also true, as low digital competence levels can lead to anxiety, oppositions and reliance on technical specialists. Ongoing training may then promote technologic adoption and help empower employees.

Socio-emotional learning, AI Readiness, and Human–AI Collaboration

AI readiness and digital skills are closely connected to the effectiveness of human–AI collaboration. While digital skills equip workers to effectively engage with intelligent systems, organizational readiness offers the technological groundwork, leadership backing, and implementation environment to support AI adoption. These all could shape the future of the use of AI as a collaborative tool or as an underutilized technological resource.

Dellermann et al., (2019) noted that hybrid intelligence is created when humans and artificial intelligence work together to produce results that neither could achieve alone. But for hybrid intelligence to be developed, suitable human capabilities must be provided. Staff need to be aware of their own duties and be mindful of the capabilities and constraints of AI systems.

Improved collaboration strength can be achieved if organizations can offer employees education on AI and opportunities to experiment with intelligent technologies. Learning experiences can help to minimize uncertainty and enhance confidence in the use of AI. These initiatives can help build the right trust, allowing employees to use AI when suitable and retain their critical thinking abilities.

METHODOLOGY

Research Design

A qualitative multiple case study was used in this study to examine the relationship between AI readiness, digital skills, and the human-AI interaction and intelligent automation in the organizations. A multiple-case study approach was chosen because it allowed an in-depth analysis of the implementation of AI in various organizational settings and because it helped to identify commonalities and differences between cases. This study was centered on organizational experiences with AI adoption, employee preparedness, training employees for digital skills, and interacting with intelligent automation tools.

Case Selection and Participants

A purposive sampling technique was used and multiple organizations that had implemented AI technologies to enable automation were chosen. The organizations that were chosen were in varying sectors where AI was being applied for organizational processes and decision making. The participants were chosen because they had first-hand experience with AI technologies and intelligent automation. Representatives from information technology, managers, AI implementation, and employees comprised the participants. The study included participants who were experienced with AI-enabled technologies (at least one year) or who had firsthand experience in implementing AI.

Data Collection

Semi-structured interviews, organizational documents, and AI implementation reports were used to gather data. To gain a deeper understanding of the specific dimensions of organizational AI readiness, digital skills, employee experience, challenges, and trends in human-AI collaboration, semi-structured interviews were conducted with the selected participants. The length of interviews was about 30-50 minutes, face-to-face or via online communication platforms. With the consent of the participants, the interviews were recorded and transcribed for analysis. In addition, documents related to the organisation's activities, digital transformation strategies, training documents and AI implementation reports were scanned, which gave further context to the data.

Data Analysis

Thematic and cross-case analysis were used in analyzing the collected data. The interview transcripts and organizational documents were read a number of times in the beginning to familiarize oneself with the data. Initial codes were identified and established for meaningful statements and responses. The codes were then aggregated to form more overarching categories and themes. The key themes were AI readiness, upskilling for digital skills, employee adaptation, trust in AI, human-AI collaboration, intelligent automation, and implementation challenges.

The results were then analyzed by cross-case analysis to identify similarities and differences in the selected organizations. This analysis ensured that the common experiences and differences across the

field of AI adoption and working with intelligent systems were identified. Data triangulation was used to compare the findings from interviews and organizational documents. After careful review of the responses from participants, the credibility and consistency of the interpretations were further enhanced.

Methodological triangulation was used to increase the credibility of the findings, comparing interview data to organizational documents and implementation reports. The selected organizations were compared across cases to look for common ground. All participants were anonymous except in providing organizational and individual names, which were replaced by pseudonyms. All interviewees gave informed consent prior to interview. All the information collected was for academic research only.

ANALYSIS AND FINDINGS

The six major themes that emerged from the thematic and cross-case analysis provide an explanation for the role of AI readiness and digital skills in human–AI collaboration and intelligent automation. The analysis revealed that there was a need for intelligent automation beyond just the technological infrastructure, there was a need for organizational readiness, employee digital literacy, trust, and reimagining jobs to leverage complementary human and AI capabilities.

Participant Profile

The participants included employees, managers, IT specialists, and AI implementation professionals who had direct experience with AI-enabled technologies.

Participant Group	Number of Participants	Main Role
Employees	10	Used AI and intelligent automation systems
Managers	6	Supervised AI adoption and organizational processes
IT Specialists	5	Managed technical infrastructure and system integration
AI Implementation Professionals	4	Supported AI implementation and employee training
Total	25	Multiple organizational roles

The inclusion of participants from different professional groups provided a broader understanding of AI adoption. Employees described their direct experiences with AI systems, whereas managers and implementation professionals explained organizational strategies and challenges.

Theme: Organizational AI Readiness

It has been found that the readiness of the organizations for AI is a significant determinant of intelligent automation adoption. The companies that had a clearer digital strategy, leadership, and support, the right technological infrastructure, and training opportunities had a smoother transition to AI.

Dimension of AI Readiness	Key Findings	Influence on Intelligent Automation
Strategic readiness	Clear AI objectives and implementation plans	Improved direction and coordination
Technological readiness	Availability of digital infrastructure and data systems	Supported reliable AI implementation
Leadership readiness	Managerial support and communication	Reduced employee uncertainty
Workforce readiness	Employee preparedness for	Increased acceptance and

	technological change	participation
Learning readiness	Availability of AI and digital training	Improved adaptation to intelligent systems

The results indicated that AI technologies were more effectively implemented when companies had trained employees in advance to their new technologies. But those organizations that concentrated mainly on technology, but did not adequately prepare their staffs, had more resistance and implementation challenges.

Theme: Digital skills as a base to work together with AI for humans.

Digital skills were identified as a key theme in the cases. The lack of basic computer skills was not enough to interact with an AI system, the participants noted, as they emphasized that this need would be further complicated by the requirement that the AI system would need to understand the specific context and intent behind the use. Staff required digital skills to solve problems, interpret data, use AI tools, and analyze AI-generated content.

Digital Skill	Employee Capability	Contribution to Human-AI Collaboration
Digital literacy	Effective use of digital systems	Improved technology adoption
Data literacy	Understanding and interpreting data	Supported AI-informed decisions
AI interaction skills	Ability to use AI tools and prompts	Improved quality of collaboration
Critical evaluation	Questioning and verifying AI outputs	Reduced overreliance on automation
Problem-solving	Combining AI outputs with human judgment	Improved decision-making

The analysis revealed that those who had greater digital skills had more confidence in their use of AI technologies. They were more inclined to try out clever systems and had a greater understanding of incorrect or inappropriate AI results. Limited digital skills employees were more likely to rely on technical specialists and less inclined to be comfortable with intelligent automation.

Theme: Employee Adaptation and Changing Work Roles

The findings demonstrated that AI adoption changed employee roles rather than completely replacing human involvement. Intelligent automation performed repetitive, data-intensive, and routine tasks, while employees increasingly focused on supervision, decision-making, communication, creativity, and complex problem-solving.

Previous Work Activity	AI-Enabled Activity	Human Contribution
Manual data processing	Automated data processing	Verification and interpretation
Routine reporting	AI-generated reports	Critical analysis
Information search	AI-supported information retrieval	Evaluation and contextualization
Repetitive customer responses	AI-supported communication	Complex and personalized interaction
Operational monitoring	Automated system monitoring	Oversight and intervention

The participants shared that "continuous learning is required for successful adaptation. Those trained felt that AI was a helpful tool. The information given to employees on intelligent systems, however, did not always provide adequate orientation, and sometimes employees felt threatened by automation and felt it was threatening their jobs and their sense of identity.

Theme: Trust and Human Oversight

Another factor that was found to have a significant impact on human–AI collaboration is trust in AI. When using AI, participants often followed the recommendations if they thought the systems were reliable and useful. The results revealed, however, that the level of trust was necessary for effective collaboration, not universal reliance on automation.

Level of Trust	Employee Behavior	Outcome
Low trust	Avoided or ignored AI recommendations	Underutilization of AI
Moderate trust	Used AI with human verification	Effective collaboration
Excessive trust	Accepted AI outputs without evaluation	Risk of automation errors
Appropriate trust	Evaluated outputs based on context	Balanced human–AI decision-making

The results indicated that human intervention was still crucial, especially in complex decision-making, ethical dilemmas, and interpreting context. Workers pointed out that while AI tools can generate information and recommendations quickly, the human element is needed to assess their suitability for the organization's context.

Theme: Intelligent Automation and Organizational Performance

The analysis revealed that when AI systems were integrated with the right kind of human engagement, the intelligent automation was beneficial to the organization's efficiency. Improvements in task completion, information processing, workflow efficiency and decision support were reported by the participants. The benefits, however, were dependent on the levels of AI readiness and employee digital competency.

Area	Contribution of Intelligent Automation	Human Role
Efficiency	Reduced repetitive work	Managed exceptions
Productivity	Accelerated task completion	Supervised processes
Decision-making	Generated data-driven recommendations	Made final contextual decisions
Innovation	Supported idea generation and analysis	Applied creativity and judgment
Service quality	Automated routine interactions	Provided personalized support

The findings revealed that intelligent automation created the greatest value when organizations designed AI systems to complement employees rather than replace all forms of human involvement.

Cross-Case Comparison

The cross-case analysis indicated significant differences between AI ready and not so AI ready organizations and the same was true for the ones that had high digital competence of their employees and the ones that did not.

Organizational Condition	High AI Readiness	Moderate AI Readiness	Low AI Readiness
Employee preparation	Extensive training	Limited training	Minimal preparation
Digital skills	Strong	Developing	Limited
AI acceptance	High	Moderate	Low
Human–AI collaboration	Integrated	Emerging	Fragmented
Intelligent automation	Effective and	Partially effective	Difficult

	stable		implementation
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High AI readiness organizations had consistent employee training, leadership support, and implementation plans. These groups showed greater human-AI collaboration and intelligent automation. For organisations that were moderately ready, improvements were noted but challenges remained in terms of employee skills and acceptance. Firms with lower levels of readiness reported higher levels of resistance and lack of use of AI technologies.

CONCLUSION

This research found that there was a strong link between organizational AI readiness and employee digital skills on human-AI collaboration and intelligent automation. The results revealed that advanced AI technology isn't enough on its own for successful intelligent automation. Companies that had defined strategies, created suitable technological infrastructure, provided employees with support and conducted ongoing education were more successful in adopting AI. Digital skills were especially relevant for their ability to interact confidently with intelligent systems, to interpret information created by AI, to evaluate the automated recommendations, and to keep appropriate human oversight. The study also found that intelligent automation changed work roles, moving the human role from simply performing rote tasks to supervision, problem-solving, situational judgment, creativity, and complex decision-making. Trust was also important, because staff had to build a balance of trust to both use AI and not depend too much on the output of AI. As a whole, when the AI technology supplemented human capabilities, successful collaboration with AI was realized.

RECOMMENDATIONS

Organizations should evaluate their technological, strategic and workforce readiness before adopting automation powered by AI. Companies need to have a clear strategy for implementing AI that outlines the use of intelligent technologies and the changes in job functions. Companies must have a clear plan for AI adoption, detailing the use of AI technologies and the role changes of employees. Digital and AI training should be ongoing and undertaken at various levels of the organization for workers to become comfortable using intelligent systems. Beyond operational aspects, training needs should be directed not just at the technical aspects of AI usage, but on how to interpret the information, critically analyze the output of an AI, use AI responsibly and properly, and monitor and oversee its functioning. Organizational leaders must embrace a participatory approach to implementing AI and communicate with their employees about concerns regarding job security and technological advancement. They should also establish smart systems of automation to augment humans, so that the employees can stay in control of the complex, ethical and context-dependent decisions. Last but not least, there is a need to put in place the capability to measure AI performance, detect mistakes, gain trust and train employees to adapt to AI changes. This human-centric approach can improve the synergy between humans and AI, and help organizations reap more long-term returns from intelligent automation.

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