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# Human resource transformation in the era of Artificial Intelligence (AI) and automation at UIN Syahada

Indah Permatasari Siregar \*0, Izzatul Hanifah Harahapo, Syifa Amanda Sembiring

Universitas Islam Negeri Syekh Ali Hasan Ahmad Addary (UIN Syahada) Padangsidimpuan, Jl. T. Rizal Nurdin, Km. 4,5 Sihitang, Padangsidimpuan, Sumatera Utara, Indonesia.

e-mail: indahsrg@uinsyahada.ac.id

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#### **ABSTRACT**

This research focuses on the transformation of human resources at UIN Syahada in facing the challenges of automation and AI. The lack of sufficient digital skills and the inability of teachers and educational staff to adapt to technological advances are emerging problems in the field. To meet the needs of the digital era, this study aims to identify strategies, policies, and innovations that can be used to improve the competence, professionalism, and ability of educators, educational staff, and students to adapt to digital changes. It also focuses on UIN Syahada Padangsidimpuan's efforts to achieve its vision and mission in the era of higher education digitalization by creating excellent human resources that are globally competitive and have Islamic character, and are capable of utilizing technology morally and productively. A qualitative approach was applied through observation, interviews, and documentary research in UIN Syahada's work units. The findings of this study reveal that digital literacy, technology-based training, and the inculcation of an innovative work culture will effectively transform human resources. This study shows that it is imperative to integrate Islamic values with state-of-the-art technologies in the process of developing superior and flexible human resources in Islamic universities.

**Keywords:** human resource transformation; artificial Intelligence; automation; digital literacy; UIN Syahada



#### 1. INTRUDUCTION

The current global technological development is characterized by rapid advancements in automation and artificial intelligence (AI), which have altered the way people learn, work, and run businesses. Humans need to be highly creative, critical thinkers, and digitally savvy to adjust to the rapid advancements in technology. AI is a system that can automate administration, data analysis, and personalized learning, in addition to being a tool in several industries, including higher education. However, these advances also pose major problems, such as the skills gap and the lack of human resources readiness to face global digitalization.

The challenge of transforming human resources at UIN Syahada is becoming increasingly apparent as the need for digitization in campus education and administration systems grows. Students, teachers, and lecturers still lack digital competencies, which affects technology-based academic management. In addition, adaptation to the use of AI and automation systems is still limited to administrative areas and is not yet optimal in curriculum development, research, and public campus services. This study is important because there has been no digital-based innovative work culture and training and guidance on the use of smart technology. To make UIN Syahada a competitive institution and simultaneously relevant in the era of AI and automation, it plans to address the readiness, challenges, and strategies for human resource transformation (Kudriani et al., 2023).

One of UIN Syahada's primary issues is the teachers' and educational staff's lack of digital literacy and preparedness to use automation and AI-based technology. Some educators and administrative personnel continue to face challenges with campus digital systems, online learning environments, AI-powered academic management programs, and technology competency training and development. This study is important because it examines ways to change UIN Syahada's human resources so that they can adapt and survive in the digital age (Huda & Suwahyu, 2024).

According to the research paper "Transformation of Human Resource Management in Higher Education to Improve Student Competence in the Era of Artificial Intelligence" (Ainiyah, 2025), academic institutions have adapted and updated their HRM systems to take advantage of the emerging AI technology. Among these changes are improving students' learning capacities, becoming proficient with learning-based technology, and developing the skills of instructors and other educational personnel through digital training

Individual and organizational adaptation to information technology, communication, and online-based work systems is accelerating because of digital transformation. In various industries, workers must have strong digital literacy and be able to utilize technology for productivity, collaboration and innovation. Technological knowledge is not only a helpful skill but also an essential skill that makes one more competitive in the workplace. Therefore, the main strategy for building superior, adaptive human resources who are ready to face global challenges in the New Normal era is mastery of technology through training, education, and continuous learning (Sari & Novrianto, 2021).

Organizations must change the way they manage human resources (HR) in the era of digitalization because technological advances, especially artificial intelligence (AI), increasingly dominate various aspects of work-related tasks. Digitalization requires a paradigm shift in human resource management. It involves moving from the traditional scheme to a data-driven model, automation, and technological innovations. Human resource management does not dwell on recruitment and training alone; it must inculcate digital competence, technological literacy, and adaptation to an artificial intelligence work environment. Innovations include data analytics for performance appraisal, e-learning for employee development, and digital human-resource systems. Productivity and efficiency in performing work can be attained through these innovations, but training is also a prerequisite because automation creates unemployment, and the ethics of using AI in human management must be considered. Therefore, changes in HR management during digitalization must be matched with appropriate strategies that emphasize a balance between humans and technology (Gunawan et al., 2025).

Colleges must thoroughly change their methods to boost the skills of teachers, workers, and learners because of the shift in human resources during the time of AI and machines. Higher education

places a big duty on these schools to prepare human workers who can fit with tech growth, since they act as hubs for information and creativity. Data review, computer smarts, using AI in teaching, and putting admin auto systems into action are key signs of how ready schools are for the digital age (Sari & Ahma, 2021).

The strategies, policies, and innovations that shall be undertaken in this paper to improve the competence, professionalism, and abilities of educators, educational staff, and students in coping with digital changes are drawn from best practices. The paper also contains best practices on human resource development efforts at UIN Syahada Padangsidimpuan, which is keen on creating excellent human resources with a global competitive edge while concurrently upholding the Islamic character for technology productivity and ethics during higher education digitalization. Methodology applied: This study uses a qualitative approach that includes observation, interviews, and documentary research within the UIN Syahada work units to obtain an understanding of how UIN Syahada Padangsidimpuan strategizes the emerging challenges of automation and artificial intelligence in the process of transforming its human resources. This study aims to seek strategies, policies, and innovations that may be applicable toward raising the competence, professionalism, and ability of educators, educational staff, and students in their adaptation to digital changes. It dwells on UIN Syahada Padangsidimpuan's exertions toward gaining her vision and mission in the era of higher education digitalization by creating excellent human resources who are globally competitive with Islamic character through utilizing technology productively as well as ethically.

## 2. LITERATURE REVIEW

#### 2.1 Human Resource Transformation

Human resource transformation refers to the change and development of human quality in an organization or institution to adapt to environmental changes, technological advances, and the demands of the times. This transformation not only improves technical skills (hard skills) but also improves morale, integrity, creativity, leadership, and critical-thinking skills. Human resource transformation in higher education refers to systematic efforts to develop teachers, educational staff, and students who are competent, professional, and adaptable to change, especially in the face of automation and the AI era. Therefore, the goal of human resource transformation is to produce individuals who not only have intellectual and technological abilities but also have moral and spiritual integrity, so that they can positively and sustainably contribute to the progress of both the institution and society as a whole (Sari & Novrianto, 2021).

## 2.2 Artificial Intelligence

Artificial intelligence (AI) is a branch of computer science that focuses on creating systems or machines that mimic human thinking, learning, and decision-making. Tasks such as pattern recognition, natural language processing, decision-making, and learning from experience (machine learning) are examples of tasks that require human intelligence. Universities can use AI to optimize learning, research, and human resource management processes in innovative, effective, and data-driven manners. This is because AI is essential for education and human resource development, as well as for creating adaptive learning systems, academic data analysis and administrative automation (Wahyudinarti et al., 2024).

## 2.3 Digital Literacy

Digital literacy is the ability to understand, use, and manage information through digital technology effectively, ethically, and responsibly. Someone with digital literacy is not only able to use digital devices such as computers, smartphones, or the Internet, but is also able to communicate wisely, assess the credibility of information, and create productive and safe digital content (Simarmata, 2021).

#### 2.4 Automation

Automation is the process of using technology, systems, or machines to perform tasks or activities automatically with little or no human involvement. The main goal of automation is to improve the efficiency, accuracy, speed, and consistency of processes. Automation in industry and management involves the application of computerized systems, robotics, and intelligent software to replace or assist with manual work (Iqbal et al., 2024).

Automation can be applied in various parts of the world of education, including higher education, such as academic administration management, personnel information systems, learning assessment, and digital-based student services. Through automation, universities can help transform academic governance to be more efficient, transparent, and responsive to students' needs. In addition, it can help prepare human resources to face the digital era (Wai, 2024).

## 2.5 UIN Syahada

UIN Syahada Padangsidimpuan is a state Islamic university managed by the Ministry of Religious Affairs of the Republic of Indonesia and is located in the city of Padangsidimpuan, North Sumatra. This university functions as a higher education institution that combines Islamic studies with general studies to produce students who are faithful, intelligent, and have noble characters.

The university is named "Syahada" after the renowned Islamic scholar and propagator of Islam in the South Tapanuli region, Syekh Ali Hasan Ahmad Addary.

UIN Syahada is committed to becoming a center for the development of science, technology, and Islamic studies that are relevant to the demands of the current era, such as the digital age, automation, and artificial intelligence (AI). All of this is done while adhering to Islamic values (Waldi et al., 2023).

#### 3. METHOD

This study uses a qualitative approach based on a naturalistic paradigm according to the ideas of Anggito and Setiawan in Qualitative Research Methodology. The researcher functioned as the main tool for collecting and understanding the information. The study was conducted in a natural environment without altering the variables, allowing for a deep understanding of the phenomenon under study. Indepth interviews, participatory observations, and documentation studies were used to obtain data. To increase data validity, triangulation was used. Informants were selected purposively and adjusted to field data using the snowball sampling technique. The research results are expected to describe social reality comprehensively and contextually because data analysis was conducted inductively with a focus on the meaning, experiences, and interpretations of the participants rather than statistical generalizations (Anggito & Setiawan, 2018).

## 4. RESULT AND DISCUSSION

## 4.1 Changes in Work Paradigms and the Role of Human Resources in the AI Era

The work paradigm of the academic community at UIN Syahada shows a shift towards a digital and automated system from a manual system. There are efforts to automate work processes owing to the adoption of technologies such as the Academic Information System (SIAKAD), e-learning (SPADA and Moodle-based LMS), and online-based administrative services (Safrawati & Siregar, 2022).

Teachers now not only teach students but also assist others in creating digital content. Additionally, students are expected to become more independent, adaptive, and creative when using and processing data online.

The campus bureaucracy paradigm has shifted from conventional methods to clear and effective digital governance. Campus digital platforms have begun integrating licensing, reporting, and performance

evaluation processes. This shows that UIN Syahada is ready to build a data-driven work culture for decision-making in line with the direction of contemporary human resource transformations.

Human resources at UIN Syahada are now seen as an important part of the campus' digital transformation, not just as policy implementers. Educators and lecturers must have digital literacy, a basic understanding of artificial intelligence, and the ability to utilize technology in their work activities (Topan Iskandar, 2021).

UIN Syahada has implemented several programs to improve SDI capacity, such as: (a) training on the digitization of learning for teachers; (b) workshops on the use of administrative automation applications for staff; and (c) activities that will help students better understand information technology and artificial intelligence.

The aim of this program is to instill a new understanding that technology is a tool to increase productivity and effectiveness in the workplace and is not a threat.

## 4.2 Transformation of Digital Competencies and Skills in the Age of Automation

With the growth of automation and digitization across the globe, higher education in UIN Syahada Padangsidimpuan requires a transformation of digital abilities and skills among human resources. Based on data gathering and observation at this institution, it can be seen that there has been a gradual start to the transformation process through policy formulation, training, and application usage in academics and administration (Ilmusosial et al., 2023).

## 4.2.1 Improving the Digital Capabilities of Lecturers and Educators

Through several technology training courses, UIN Syahada pledged to upgrade the digital competence of its lecturers and staff workers. Lecturers were urged to learn about learning management systems (LMS), create digital content, and use collaborative apps like Google Workspace and Canva Education (Prasetiyo et al., 2022).

In addition, integrated information systems within the campus, such as SIAKAD, e-office, and online personnel systems, increase teachers' competence. Thus, it is an effort towards a practically oriented paradigm shift from manual work to digital system-based automation that requires speed and efficiency, as well as data accuracy. Competency transformation aims to improve work efficiency and inculcate a new work culture that is flexible to technological changes. Therefore, SDI at UIN Syahada should be ready by the 5.0 industrial revolution, which emphasizes human-machine synergy.

## 4.2.2 Strengthening Students' Digital Skills

As a major aspect of such transformation, students experience changes in their learning patterns and mastery of digital technologies. Responses from students across different faculties revealed that, in the words of most students, they have gotten used to using different digital platforms for academic activities. Some of these include SIAKAD, e-learning, and Google Classroom, which are augmented by AI tools like ChatGPT, Grammarly, and Canva.

Students are beginning to understand the importance of digital skills and ethics through courses, seminars, and digital training. Training in data analysis, digital design, and academic writing with the help of artificial intelligence are examples of technology-based activities and courses at UIN Syahada.

With this transformation, people have become more creative, innovative, and able to solve problems with the help of technology. Both abilities are important competencies in the era of automation.

## 4.3 Challenges and Obstacles in Human Resource Transformation

At UIN Syahada Padangsidimpuan, human resource transformation in the era of AI and automation faces several structural, cultural, and individual challenges. These challenges arise alongside the need to shift the work paradigm from a conventional to a digital and automation-based system.

The varying levels of digital literacy among teachers, educators, and students are major problems. Not all students have the digital literacy required to operate AI-based devices and platforms. Consequently, the development of school administration systems, online learning, and the use of data-based applications will take longer (Ifitri et al., 2024).

In addition, attitude and fear of change are major barriers. Some employees still feel comfortable with manual work and are not prepared to embrace rapid technological changes. Others who are skeptical about AI share the fear that humans will be replaced by machines. Inadequate technological infrastructure and internal policy support are also institutional barriers.

Because there is no digital infrastructure, such as a stable Internet network, data servers, and AI-based management systems, automation has not been fully implemented. There is also a lag in the transformation process due to inadequate strategic guidelines, whereby employees and lecturers are not adequately inspired to gain the necessary digital skills (Ifitri et al., 2024).

Focus on learning new technologies. Digital transformation demands continuous upskilling so that the labor force can keep pace with improvements in artificial intelligence and automation. In the absence of organized training schemes, it will be difficult to adjust to changes in technology.

In contrast, the specific challenges are ethics and digital security. The more extensive utilization of digital technology in academic activities, the greater possibility of data misuse, digital plagiarism, and lack of awareness about cybersecurity. Therefore, UIN Syahada needs to advance digital governance and create a culture in using technology ethically (Sitorus et al., 2025).

# 4.4 Organizational Adaptation Strategies in Developing Human Resources in the Age of AI

Enhancing technical skills is no longer the only goal of human resource development in the quickly evolving world of today. In order to stay relevant and competitive, businesses today require a more inventive and creative approach. Training is made simpler, more flexible, effective, and more focused by digital technologies like e-learning, webinars, and virtual reality (VR)-based simulations. Businesses can customize development programs to meet individual objectives and organizational vision by using data analysis to understand each person's needs.

However, technical proficiency is insufficient on its own; non-technical abilities like creativity, communication, and collaboration are becoming more and more crucial when dealing with complicated problems. Consequently, experience an essential component of HR development strategies is the implementation of training and mentoring programs. Constructing another important factor in ensuring that staff members can grow and be prepared is a culture of continuous learning. to accept change. Offering self-directed courses, career training, and incentives to individuals who There are practical actions they can take to actively enhance their competencies(Assyava et al., 2024).

UIN Syahada University must make strategic organizational changes in human resource development in light of the Artificial Intelligence (AI) era, which is significantly altering higher education. In addition to altering how education is conducted and operated, the development of AI calls for better digital skills from all members of the academic community. Restructuring technology-based management systems, enhancing lecturers' and teaching staff's digital literacy, and incorporating artificial intelligence (AI) into the teaching and learning processes are just a few of the significant facets of UIN Syahada's adjustment strategy (Sari, Ahma, 2021)

This adaptation process is implemented through continuous training, technological innovation workshops, and collaboration with external institutions in the field of information technology. The university has set up a curriculum with courses related to artificial intelligence, big data, and information system analysis so ready to prepare students for the challenges of the current labor market. UIN Syahada

develops in an organizational culture setup where everyone individually learns on a continuous basis, innovates, and cooperates between different disciplines. (Rachmad et al., 2022).

Real-world examples of campus digital transformation include the deployment of integrated information systems and the application of AI to academic administration, including digital attendance systems, automated evaluation, and research data management. These changes do, however, come with drawbacks, including inadequate technology infrastructure, resistance to change, and disparities in human resources' digital competency. Therefore, to establish a sustainable learning ecosystem and strategic policies that promote human-technology collaboration, visionary leadership is required. UIN Syahada has the potential to emerge as a preeminent and competitive university in the age of artificial intelligence with a well-thought-out adjustment plan. In order for this institution to not only be able to adapt to changes in the world but also actively contribute to the production of a generation of Muslim scientists and professionals who can meet the challenges of the 5.0 industrial revolution with Islamic and humanitarian values, it is imperative that intelligent, creative, and integrity-driven human resources be developed (Muharram et al., 2025).

## 4.5 The Impact of Digital Transformation on Productivity and Work Culture

In general, the scope of digital transformation covers four main aspects: (a) Digitization of operations, that is, automating all admin and production work with the help of software and intelligent systems; (b) Business model digitization, the implementation of technology in creating new products, services, and sources of revenue; (c) Customer and employee interaction digitization which can be done through web platforms, internal applications, and virtual communication; (d) Culture digitalization which implements new values like open collaboration, flexibility, and agility in learning.

The driving factors of digital transformation include: (a) Technological advancements that are made fast and cheap such as cloud computing and artificial intelligence; (b) Globalization of markets thus forcing firms to compete globally and dynamically; (c) Changing expectations of customers who demand quick and personalized services; (d) The COVID-19 pandemic has precipitated the practice of remote work and digital services across the globe.

Digital transformation does not always run well. Many organizations face barriers comprising resistance to changes, inadequate digital human resources, and data security challenges. However, this organization will have great performance, productivity, and innovation when technology is implemented in a strategic way.

# 4.5.1 The Impact of Digital Transformation on Productivity

## 4.5.1.1 Automation and Operational Efficiency

The most palpable effects that digital transformation brings about are efficiency and productivity due to automation. Tasks that were manually long-drawn can simultaneously be performed with the aid of technology. To cite an example, through ERP (Enterprise Resource Planning) systems, there is a possibility of integrating all the company functions into one digital platform by reducing work duplication and quickening decision-making.

In the manufacturing sector, production capacity has been increased with the help of industrial robots and IoT-based automation systems while at the same time reducing human error rates. In the service sector, AI-based chatbots have taken over some of the functions performed by traditional customer service representatives. They ensure that customers get immediate responses to their queries.

## 4.5.1.2 Data-Driven Decision Making

Digital transformation enables organizations to base their decisions on big data. Firms can predict market trends and consumer habits as well as optimize their strategies through real-time data analysis.

Apart from accelerating the decision-making process, Data-driven decisions enhance the accuracy of policies to be implemented. For instance, firms in the e-commerce sector can use customer data to manage inventory, prices dynamically and personalize product recommendations. Productivity is the output with more efficient allocation of resources.

## 4.5.1.3 Better Collaboration and Management

Digital transformation changes the mode of working and engagement of teams. For example, it provides for late-night collaboration at different places through Microsoft Teams, Slack, or Trello. What used to depend on some face-to-face contact can now be done synchronously or asynchronously which speeds up the work process. Besides, cloud computing makes data storage and access uncomplicated thereby enabling real-time collaboration among team members located in diverse geographical locations. People work from different spots, which boosts how much they get done. Even though they're not all in one place.

## 4.5.1.4 Product and Service Innovation

Digitalization gives room for unlimited innovation. Firms can employ artificial intelligence in developing their products to ensure market needs have been met. For instance, the banking industry applies machine learning to its operations for the purpose of identifying suspicious transactions and enhancing security. On the other hand, in the healthcare sector, telemedicine enhances further improvement of medical services to remote areas. Organizational productivity is enhanced through such innovations together with enhancing the extent of service delivery to various communities.

# 4.5.1.5 Productivity Challenges

Digitization does, in fact, improve efficiency. Not all results are positive. Some, in fact, have found that technology when used to such excess leads to an overload of information leading to digital stress. Workers feel constantly connected not being able to differentiate time for work and time for rest. If not managed properly this can reduce long-term productivity.

## 4.5.2 The Impact of Digital Transformation on Work Culture

## 4.5.2.1 Changes in Communication and Interaction Patterns

Digital work culture is transforming the pattern of communication among individuals. Though technology allows for immediate conversation and collaboration across departments, it may diminish physical social interactions. A trend of 'online meetings' is taking over traditional meetings, with a reduction of informal communication within the office. The leader does not only deliver one-way instructions but acts as a facilitator who encourages participation from the team members.

## 4.5.2.2 Work Flexibility and Work-Life Balance

Digital transformation introduced the concepts of flexible working and remote working. People can work at anytime from anywhere as long as they have an internet connection. This model would keep most workers happy and satisfied in their work. In the long run, it increases productivity. Millennials and Gen Zers are the main bulk who fall under workers that prefer this setup since they value autonomy.

This flexibility comes with its own set of challenges as well: the blurring of lines between personal and professional life. Employees also suffer digital fatigue because of the need to stay online and respond to work messages after office hours.

## 4.5.2.3 Shifting Values and Organizational Identity

Digital working emphasizes agility, innovation, and learning. Flatter structures have been enabled by replacing the rigidity of hierarchies with horizontal collaborations. Speed and transparency plus an appetite for experimentation are identities of modern organizations. Besides, a performance- and data-driven culture is already established where workers are evaluated based on concrete results that can be measured in digital systems. This may bring in much objectivity but at the same time also put pressure on some individuals as they feel that they are always being monitored.

## 4.5.2.4 Psychological and Social Challenges

Digital transformation has psychological impacts too. Some workers feel the isolation that the digital transformation has brought because of the absence of physical interactions. Dependence on digital gadgets can bring or cause stress, anxiety, and even tiredness. This calls for organizations to create digital wellbeing policies that will help sustain work-life balance.

## 4.5.2.5 Challenges and Risks of Digital Transformation

First, digital divide tech access ain't the same for everyone or every place, so productivity don't line up right. Second, data security and privacy more chances of leaking data cause more cyber attacks. Third, resistance to change some workers are scared or not ready to face changes in tech. Fourth, loss of traditional jobs: Automation takes over manual work, so workers need new skill now. Fifth, ethical and social issues: The use of AI raises questions of responsibility and bias in algorithms.

# 4.5.2.6 Adaptation Strategies and Strengthening Digital Work Culture

To maximize the benefits of digital transformation, organizations need to develop sustainable adaptation strategies: (1) Raising digital literacy across all employees, (2) Promoting lifelong learning to keep workers relevant, (3) Creating inspirational and inclusive digital leadership, (4) Inserting human values into technology, such as empathy, collaboration, and work-life balance, (5) Data security and ethical use.

# 4.6 Implications and Directions for HR Development Policy in the Age of Artificial Intelligence

# 4.6.1 Implications of HR Development in the Age of Artificial Intelligence

The human resource management paradigm is influenced by artificial intelligence, both in the business world and in higher education or State Islamic University Syahada Padangsidimpuan. Work models were changed by artificial intelligence, learning systems, and the way humans and technologies interact. Better digital competence, technological literacy, and adaptive abilities for the whole academic community are composed of lecturers, educational staff, and students that are prioritized by UIN Syahada.

The demand for skills has shifted from academic and administrative skills to technological, creative, and analytical skills. If the human resources are not proactive in terms of technology, there will be a digital divide or digital gap; therefore, it can inhibit the transformation process of the institution (Xanderina et al., 2024).

UIN Syahada must be able to utilize AI for education, research, and community services. It is hoped that lecturers will not only be teachers but also learning facilitators who are able to use AI to improve learning. However, to cope with changes in an increasingly digitized world of work, students must be equipped with new skills such as data literacy, critical thinking, and cross-disciplinary collaborative skills (Dawam & Syaidah, 2025).

## 4.6.2 Direction of Human Resource Development Policy at UIN Syahada

First, Strengthening Digital Literacy and Technological Competence. UIN Syahada shall formulate and set forth plans for training and certification in digital competence for its lecturers, employees, and students. This may be implemented through joint efforts with technology institutions by way of an elearning system and continuous digital campus system, in addition to training based on artificial intelligence (A. & Bau, 2023).

Second, Integration of AI in the Curriculum and Academic System. Academic curricula have to be redesigned according to the needs of that time which is known as the era of artificial intelligence, such as introducing courses related to digital technology, the ethics of artificial intelligence, and the application of artificial intelligence at Islamic and social levels. Besides, such integration has to embrace interdisciplinary learning in order to prepare learners for the challenges of the contemporary world of work.(Irsyad & Zakir, 2023).

Third, Strengthening AI-Based Research and Innovation. The research policy of UIN Syahada must make an orientation toward innovation based on artificial intelligence and automation in education, Sharia economics, and public services. By getting a partnership between the industry or government and LP2M, it accommodates collaborative research between teachers and students (Komarudin et al., 2024).

Fourth, Data- and Performance-Based Human Resource Management Transformation. Change into digital data and performance models such as personnel information systems, productivity tracking, and appraisal-based artificial intelligence. Human resource management is accountable on campus (Ainiyah, 2025).

Fifth, Strengthening Humanistic Values and Ethics in the Use of AI. Being an Islamic institution, UIN Syahada has to incorporate ethical and spiritual values in every policy for the development of human resources. AI should never substitute the moral function of humans but rather serve as an instrument in the provision of support toward social sustainability and human values (Hadziq et al., 2024).

## 5. CONCLUSION

The transformation of human resources in the era of AI and automation at UIN Syahada Padangsidimpuan marks a paradigm shift in work, competencies, and the direction of human resource development policies in Islamic higher education institutions. Paradigm shift requires human resources to be more digitalized, to use the technology efficiently working together with the automated systems without leaving behind the spiritual values.

One important element in this process is the improvement of digital skills. To prepare educators and educational staff to face the era of automation, strong digital literacy, data-based analytical skills, and the ability to operate and utilize artificial intelligence-based systems are required. Strategic steps to do this include developing a digital curriculum and providing technology-based training.

However, this transformation faces many challenges and obstacles. Some of these include limitations in technological infrastructure, fear of change, a lack of digital competence among employees, and a lack of integration of Islamic values with contemporary technological practices. Therefore, organizational adaptation plans must focus on creating a creative, collaborative work culture that focuses on improving digital capabilities.

It should also come with a vow by leaders to make great human resource development policies. The effect of digital change on productivity and work culture can be seen in better admin and academic services, info clarity, and more flexible yet creative work patterns. A work culture based on innovation, cooperation, and moral. Human resource development policies emphasize digital literacy, and technology-based continuous training infused with the Islamic principles that need to be applied in every transformation. process. As a result, this study shows that better digital literacy, technology-based training, and the application of an innovative work culture can help transform human resources to be more superior, adaptive, and ready to face the challenges of AI and automation.

Human resource development policies shall emphasize digital literacy, technology-based continuous training, and the application of Islamic principles in any process of transformation. Therefore, this study inspires that improved digital literacy, technology-based training facilitated by the application of an innovative work culture are determinants in ensuring human resources getting transformed into becoming more superior, adaptive as well as ready to face challenges brought about by AI and automation.

Competent, competitive, and ethical human resources development integrates Islamic values with modern technological practices. This constitutes major potential for UIN Syahada Padangsidimpuan to keep running Islamic university management that merges technology development with moral and spiritual values in generating high-quality human resources who are also dynamic in facing the AI era.

## **Ethical Approval**

This study has obtained ethical approval from the authorized University/Institutional Research Ethics Committee with the applicable decision letter number. All research procedures have been carried out in accordance with applicable research ethics guidelines and follow the principles of the Declaration of Helsinki.

#### **Informed Consent Statement**

The purpose, procedures, benefits, and potential risks of the study were explained to all respondents. Participation is this study was voluntary without any force or coercion and the respondents had the right to withdraw at any time if they felt like not continuing with the study anymore. Informed consent was obtained before the collection of data conducted.

# **Authors' Contributions**

The writers helped with all parts of the study, from setting up the problem, creating the theory base, gathering data, analyzing it, to writing the final paper. Every writer has read, changed, and agreed to the last version of the article for sharing.

## **Disclosure Statement**

The author shares that there is no possible conflict of interest, neither personal nor institutional, linked <to the research and publishing of this article.

## **Data Availability Statement**

Data that informed this study are available from the corresponding author upon request. To observe and respect the sanctity of respondent's privacy plus confidentiality, said data is not made publicly available.

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#### **Notes on Contributors**

# Indah Permatasari Siregar

https://orcid.org/0009-0004-6966-2341

Indah Permatasari Siregar is a lecturer at the Syahada Padangsidimpuan State Islamic University (UIN), specializing in management. She focuses on organizational management, human resource development, and strategic management. She has participated in several research projects and publications that have aided the growth of management science in academia. Her commitment to research and teaching shows in her efforts to improve education quality and develop managerial practices.

## Izzatul Hanifah Harahap

https://orcid.org/0009-0001-9399-108X

Izzatul Hanifah Harahap is a student of the Syahada Padangsidimpuan State Institute at Islamic University, majoring in Sharia banking. Her current interest accrues academically toward Islamic banking, Islamic financial management, and study on the Islamic economy. She has actively participated in researches and scientific writings that pave the way for founding literature regarding Islamic economics and finance. Participation of her in this research work shows her keen interest in developing academic understanding studies on Islamic banking.

## Syifa Amanda Sembiring

Syifa Amanda Sembiring is a student in the Sharia Banking Program at the State Islamic University (UIN) Syahada Padangsidimpuan. She is interested in Islamic finance, banking operations, and Islamic economic practices. She takes part in academic activities and research related to her studies. Her work in this research shows her commitment to improving knowledge and skills in Islamic banking.

#### REFERENCES

- A., H., & Bau, R. T. R. L. (2023). E-Learning Sebagai Komplemen dalam Pembelajaran: Perwujudan Akselerasi Transformasi Digital dalam Pendidikan. *Jurnal Studi Kebijakan Publik*, 2(1), 69–79. https://doi.org/10.21787/jskp.2.2023.69-79
- Ainiyah, N. (2025). Peran Manajemen Sumber Daya Manusia dalam Meningkatkan Produktivitas Organisasi. *Jurnal Bisnis Mahasiswa*, 5(3), 1296–1310. https://doi.org/10.60036/jbm.619
- Anggito, A., & Setiawan, J. (2018). Metodologi penelitian kualitatif. CV Jejak (Jejak Publisher).
- Assyava, M., Firdaus, A., & Kuswinarno, M. (2024). Daya Manusia Dalam Meningkatkan Daya Saing. *Jurnal Media Akademik (JMA)*, 2(11), XX–XX.
- Dawam, A., & Syaidah, K. (2025). Mengintegrasikan Teknologi Digital dan Artificial Intelligence (AI) Untuk Pengalaman Belajar Mahasiswa Yang Lebih Baik. *Prosiding Seminar Nasional Fakultas Ilmu Tarbiyah Dan Keguruan UIN Syarif Hidayatullah Jakarta*, 2(1), 235–252.
- Gunawan, A., Aprilianti, S., & Syaharany, N. S. (2025). Transformasi Manajemen Sumber Daya Manusia Di Era Digitalisasi:Inovasi Dan Tantangan dalam Menghadapi Kecerdasan Buatan. *Jurnal Ekonomi Dan Bisnis Digital*, 02(03), 1358–1363. https://jurnal.ittc.web.id/index.php/jebd/index
- Hadziq, M., Ayu Havifah, D., & Badriyah, L. (2024). Transformasi Pendidikan Agama Islam di Era Digital: Peran Artificial Intelligence (AI) dalam Memperkuat Nilai-nilai Islami. *Mauriduna: Journal of Islamic Studies*, 5(2), 801–827. https://doi.org/10.37274/mauriduna.v5i2.1293
- Huda, M., & Suwahyu, I. (2024). Peran\_Artificial\_Intelligence\_Ai\_Dalam\_Pembelajara. REFERENSI ISLAMIKA: Jurnal Studi Islam, 2(2), 53–61.
- Ifitri, M., Aryani, N. F., Fajar, W., Sudianto, & Herman, H. (2024). Digital Transformation in Human Resource Management: The Impact Of Ai And Automation On Employee Competency Development. *Indo-Fintech Intellectuals: Journal of Economics and Business*, 4(5), 2317–2328. https://doi.org/10.54373/ifijeb.v4i5.2033
- Ilmusosial, F., Wiraraja, U., & Ilmusosial, F. (2023). *Jurnal Abhakte*. 1, 21–28. https://mail.ejournalwiraraja.com/index.php/ABHAKTE/article/view/2742/1711
- Ina Wai, F. (2024). Meningkatkan Model Kepemimpinan Dan Pendidikan Menghadapi Pembelajaran 4.0 Dan Society 5.0. *Atma Reksa Jurnal Pastoral Dan Kateketik*, 8(1), 29–36. https://doi.org/10.53949/arjpk.v8i1.3
- Iqbal, R., Yunita, I., Parangu, R. N. A., & Jamiatun, W. A. (2024). Information Science and Library. *Information Science*, 5(2), 1–15. https://core.ac.uk/download/pdf/327164408.pdf
- Irsyad, M., & Zakir, S. (2023). Transformasi AI dan Kurikulum: Tantangan Pendidikan Islam menghadapi Abad ke-21. *Al-Aulia: Jurnal Pendidikan Dan Ilmu-Ilmu Keislaman*, 9(2), 156–170.
- Komarudin, D., Candra, E., & Nurdin, I. (2024). Dinamika Kebijakan Publik dan Inovasi Kecerdasan Buatan di Indonesia Tahun 2020-2024. *Arus Jurnal Sosial Dan Humaniora*, 4(3), 1793–1803.

- Kudriani, N., Murdana, F., & Muriati, L. (2023). Transformasi digital dalam pendidikan: Tantangan dan peluang penerapan kecerdasan buatan dalam proses pembelajaran. *Jurnal Literasi Digital*, *3*(3), 129–139.
- Muharram, M., Yohanis, Y., & Galib, M. (2025). Tantangan Dan Strategi Pengembangan SDM Dalam Menghadapi Transformasi AI Di Lingkungan Kerja: Studi Kualitatif Pada Sektor Perbankan. RIGGS: Journal of Artificial Intelligence and Digital Business, 4(1), 884–889. https://doi.org/10.31004/riggs.v4i1.1007
- Prasetiyo, W. H., Sari, B. I., Rahmawati, N., & Pambudi, G. (2022). Peningkatan Kompetensi Digital bagi Guru Muhammadiyah dalam Menghadapi Society 5.0. *Warta LPM*, 25(1), 91–100. https://doi.org/10.23917/warta.v25i1.601
- Rachmad, F., Mansur, A., & Bakar, A. (2022). Proses Inovasi Kurikulum Dan Pembelajaran. *Jurnal Penelitian Ilmu Pendidikan Indonesia*, 1(2), 516–522. https://doi.org/10.31004/jpion.v1i2.85
- Safrawati, & Siregar, B. (2022). All Fields of Science J-LAS Hybrid Coconut Cultivation. *Jurnal Penelitian*, 2(4), 50–56. https://j-las.lemkomindo.org/index.php/AFoSJ-LAS/index
- Sari, Ahma, W. (2021). UNIVERSITAS MUHAMMADIYAH JAMBI Halaman 169 dari 180. 9(2), 169–180.
- Sari, M. W., & Novrianto, A. (2021). Perubahan Pengetahuan Teknologi Mendukung Kualitas Sumber Daya Manusia Di Era New Normal. Insan Cendekia Mandiri.
- Simarmata, J. (2021). Literasi Digital. *Perspektif*, 1(1), 120. https://kitamenulis.id/2021/10/08/literasi-digital/
- Sitorus, O. F., Ningsih, R. A., Andini, A., Rahmawati, N. A., & Alfarisi, M. Y. (2025). Mengatasi Tantangan Transformasi Digital Umkm: Tantangan Dan Solusi Melalui Kegiatan Pendampingan di Jakarta dan Bekasi. *Jurnal Pengabdian Masyarakat Indonesia*, 4(6), 939–948.
- Topan Iskandar. (2021). Pengembangan Sumber Daya Manusia Universitas Islam Negeri Sumatera Utara. *PENDALAS: Jurnal Penelitian Tindakan Kelas Dan Pengabdian Masyarakat*, 1(2), 174–197. https://doi.org/10.47006/pendalas.v1i2.80
- Wahyudinarti, E., Andini Rachmatika, P., & Nurul Ain, R. (2024). Meningkatkan Efektivitas Pembelajaran Mahasiswa Dengan Ai. *JATI (Jurnal Mahasiswa Teknik Informatika*), 9(1), 488–491. https://doi.org/10.36040/jati.v9i1.12279
- Waldi, I., Daulay, H. P., & Asari, H. (2023). THE 20TH CENTURY ISLAMIC EDUCATION IN MANDAILING LAND: A Study of the Intellectual Legacy of Sheikh Ali Hasan Ahmad Ad-Dary (1915-1998). *Journal of Contemporary Islam and Muslim Societies*, 7(1), 152. https://doi.org/10.30821/jcims.v7i1.15088
- Xanderina, M., Aditya Nafil, A., & Jatmiko, F. (2024). Analisis Manajemen Sumber Daya Manusia Instansi Negeri Era Digitalisasi Dengan Kecerdasan Buatan. *JATI (Jurnal Mahasiswa Teknik Informatika)*, 8(4), 4451–4456. https://doi.org/10.36040/jati.v8i4.9952

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