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AI IN DEVELOPING WOMEN'S LEADERSHIP: RECOMMENDATIONS FOR THE AI IMPLEMENTATION IN HR POLICY OF HIGHER EDUCATION INSTITUTIONS

Abstract. The article discusses how artificial intelligence works in career management and gives ideas on how to use artificial intelligence in the university human resources (HR) policy. The study looks at the issues that stop women from advancing in their careers and view it as a group of connected problems that are rooted in the institution culture and HR management. Based on the results of an empirical study and literature review related to the topic of women's leadership and AI impact specific recommendations for the implementation of AI in HR policy of higher education institutions have been made. The purpose of the study is aimed at summarizing the results of the survey conducted focusing on barriers to women's career advancement rooted in institutional, cultural, and individual structures. The article talks about how artificial intelligence can help women become leaders. The paper also contributes with the review of the relevant literature on AI in women's leadership. The author wants to show how artificial intelligence can help make sure that women have the opportunities to become leaders with the AI assistance. The article gives a summary of specific recommendations for the implementation of AI in HR policy of higher education institutions based on literature review and results of conducted survey in 3 universities SDU, BTU and Narxoz University in Kazakhstan.

Keywords: artificial intelligence (AI), HR policy, women's leadership, career management and advancement, gender inequality, digital tools, soft skills.

Introduction

Women's leadership is very important in managing an organization. The things that affect women's careers are complicated due to barriers to women's career advancement, including structural, institutional and individual factors. These factors work together to create a system that keeps gender inequality in place. Historically women have not had leadership roles in both private and public organizations around the world. The article shows that women mostly develop leadership skills from life experience and being part of organizations not just from formal education. Management experience plays a key role, indicating a shift toward a practice-oriented model of leadership development. At the same time, digital tools, soft skills, and the gender agenda are undervalued, despite their central place in modern leadership theories, highlighting a gap between notions of leadership and actual development practices. People do not value digital tools, soft skills and the idea of gender equality as much as they should. These things are important in ideas about leadership, but they are not being used in real life. In other words, it shows that there is a gap between what people think leadership should be and what is actually happening.

According to UN Women they are underrepresented in leadership and senior roles and do not hold senior positions. The World Economic Forum reports that in 2023 than 30% of women hold senior leadership positions globally. Women's leadership has changed with the use of Artificial Intelligence (AI), where AI helps improve skills for making complex decisions and increase engagement in leadership development. The field of leadership studies is characterized by AI implementation to improve analytical skills in complex decision-making and increased engagement in leadership development. Nowadays AI is seen as a way to make human resources work better to select and train employees and to personalize training. The data shows that people are using technology to make things more efficient, but not to change how society works.

Different organizations understand intelligence in different ways depending on what is important to them and how comfortable they are with technology. Female executives think that artificial intelligence can be very helpful with training assessing employees and finding talent. However, they are more careful when it comes to using AI for career development.

In the result of investigation, the author suggested some practical ideas and recommendations for HR policy how to help women develop their leadership skills and manage their careers. These ideas are about how to use AI in universities HR policies. Women's leadership and AI are topics that need to be addressed, and women's career advancement and artificial intelligence can work together to create change. In the context of AI women leaders can be seen as AI mediators and play a great role in interpreting and implementing AI outputs for diverse audiences, fostering trust, inclusivity, and a shared understanding of AI supported decisions.

Methodology and methods

The research design of the article uses a data analysis methodology and comparative analysis to see how AI helps women in career growth and leadership. The analysis was conducted using a combination of theoretical and practical approaches aimed at identifying strategies in HR policy to the development of women's leadership in the context of integrating AI technologies. The study employed methods of analysis, synthesis, comparison, and statistical data processing. At the analytical stage, the relevant scientific and methodological literature was analyzed. The empirical base was compiled by surveys conducted in 3 universities in Kazakhstan: SDU, BTU and Narhoz. In the result of investigation findings confirm the recommendations based on the literature review and data analysis, gained from the survey and supporting the aims of the study.

Literature review

The literature review shows how important Artificial Intelligence is for helping women get jobs in companies and making sure there are more women in leadership positions. The results of studies conducted are about how Artificial Intelligence affects the decisions that are made and how it can help make things more equal for women.

In 2024 Ramchandani and other people looked into how Artificial Intelligence can help women and found out that Artificial Intelligence can really help women get jobs. They also found out that Artificial Intelligence can help women have rights and be more involved in the important parts of companies.

A study done by McKinsey & Company in 2015 showed that companies like Apple and IBM do better when they have women in leadership positions. Young and others did a study in 2023 that looked at the jobs that are available in data science and Artificial Intelligence. They found out that there are still some problems with fairness in these areas of computer world for a long time. Petrat et al. (2022) looked at what executives think about using Artificial Intelligence in leadership positions. They found out that Artificial Intelligence helps leaders make decisions and gives them feedback based on data. They also highlight that Artificial Intelligence can help leaders take care of their teams and make decisions. The literature review shows how Artificial Intelligence can help women get jobs and make companies better. Artificial Intelligence is very important for women's leadership roles and for making sure that companies are fair in their HR policies.

Hunt et al. (2022) found out that new things are happening under AI influence. They are concerned that people will lose their jobs because of AI. The authors highlighted the lack of research on the actual effects of AI-enabled tools in businesses. Karyotaki et al. (2022) have talked about women in business and society and how they use modern technology. They found out what causes the digital skills gap and questioned why there aren't enough women working in the growing digital business.

Petrat et al. (2022) have highlighted that people can use intelligence to solve simple and hard problems by analysing massive volumes of data. Some businesses are already using intelligence to help with things like human resources. People who are good with technology have trouble imagining what artificial intelligence will be like in the workplace or in leadership roles that show the need to do research on this topic. Plato and others (2021) studied the role of women in positions in cybersecurity companies. They investigated the experiences of these women and the problems they faced. They found out that employers need to support women and help them develop their leadership skills by helping women in their organizations writing job descriptions.

Santiago and others (2019) predicted that the artificial intelligence and big data analytics markets will grow a lot. They investigated the problems with intelligence and how they affect the people who make important decisions in businesses. They were worried about the fact that artificial intelligence can make its

decisions, which could mean that humans are not in control anymore. This shows how important it is for leaders to be aware of what's happening and to make sure that artificial intelligence is used in a way that is fair and transparent.

Ahn, H. And Kim S. wrote a study in 2023 that talks about how artificial intelligence can affect women leaders and how artificial intelligence can sometimes show women in a way that's not fair. For example, women are often described as being emotional or supportive. At the time the study says that artificial intelligence can be a tool to help make things more fair for women.

Black, J. And Turner R. Wrote (2024) investigates the women role as leaders in universities. They stated that having women leaders is very important because they bring ideas and perspectives. The authors also draw attention to the challenges that women face when they want to be leaders and need to be supported and mentored so they can succeed. The article emphasizes that diversity in leadership should be viewed as a strength because women leaders bring inclusive perspectives, innovation, collaboration, and ethical awareness to AI-related decision-making in universities. Sharma, P. And Mehta, R. Wrote in 2024 stated how artificial intelligence can help women be leaders and make sure that women are not discriminated against when they apply for jobs. Artificial intelligence can also help women balance their work and personal life. The authors stated that artificial intelligence can be a tool to help women succeed as leaders.

Verma, N. And Singh T. (2025) viewed intelligence and human resources for diversity and inclusion. The study stated that companies need to be careful and make sure that it is fair and does not discriminate against anyone. Artificial intelligence can be a tool to help create a fairer and more inclusive workplace.

So, literature reviews demonstrate different approaches in AI role in the development of women's leadership and its impact and implementation in practice. The literature review highlights that AI can positively support women's employment, leadership, and participation in business by creating job opportunities, improving leadership development, and promoting fair treatment in organizations. Studies show that companies with women in leadership positions are often more successful, innovative, and collaborative. AI also helps managers make better decisions through data analysis, feedback systems, team management, and improved human resource practices. However, the review also identifies ongoing gender inequality in AI and data science fields. Women remain underrepresented in digital industries, cybersecurity, and AI-related careers because of barriers such as limited digital skills opportunities, workplace discrimination, and unfair practices. Researchers further warn that AI systems may contain gender bias and reinforce stereotypes about women, which can negatively affect women leaders and decision-making processes.

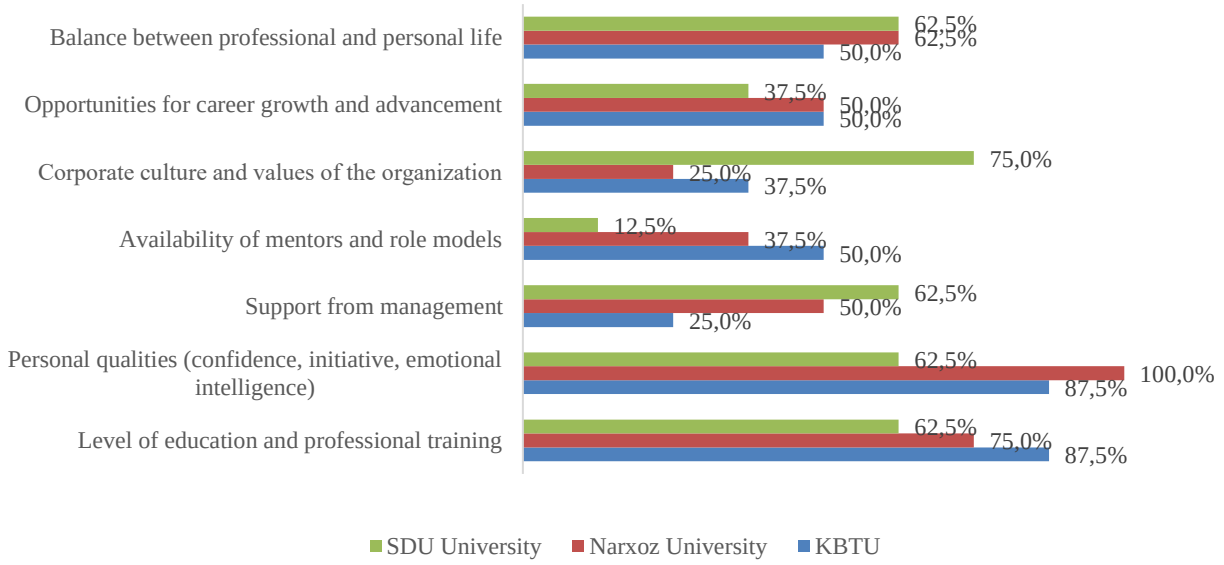
Authors also emphasize the importance of ethical and transparent AI use. While AI has the potential to create fairer and more inclusive workplaces, it can also lead to job replacement, biased decisions, and reduced human control if not carefully managed. Therefore, organizations must ensure that AI systems are inclusive, transparent, and free from discrimination. Finally, most studies conclude that mentorship, leadership development, supportive work environments, and fair recruitment practices are essential for helping women succeed in leadership roles. Diversity and inclusion are seen as key strengths for organizations, as women leaders contribute different perspectives, innovation, collaboration, and ethical awareness, especially in AI-related decision-making.

Discussion

The study was evenly distributed across three educational institutions: KBTU, Narxoz University, and SDU. The women-leaders of these universities have been interviewed on the issues related to key factors most significantly influence the formation and development of leadership qualities in women, main barriers women leaders face in their career advancement, most effective sources of women leadership development, the current level of use of AI tools in organization's HR policies, most effective AI tools for identifying and developing women's leadership potential, the implementation of AI tools in the assessment, promotion, and career development processes, the use of AI contribute to greater transparency and fairness in corporate governance etc.

Figure 1

What key factors, in your opinion, most significantly influence the formation and development of leadership qualities in women?



The data obtained demonstrate that barriers to women's career advancement are not isolated factors, but rather a system of interconnected constraints rooted in institutional, cultural, and individual structures. The high prevalence of gender stereotypes (up to 75%) indicates the persistence of a gender order in which leadership continues to be associated with "masculine" characteristics. Leadership chances for women often get limited by rules and unseen biases about their abilities. Differences between universities show mostly fixed systems blocking progress, while elsewhere it's unwritten norms or job expectations holding them back. The data confirms that gender inequality is not universal but depends on the specific institutional context.

Table 1.

What are the main barriers women leaders face in their career advancement?

	KBTU	Narxoz University	SDU University
Gender stereotypes and bias	75,0%	50,0%	62,5%
Limited access to management positions	50,0%	37,5%	37,5%
Lack of support and mentorship	25,0%	25,0%	25,0%
Opaque evaluation and promotion procedures	75,0%	50,0%	25,0%
Combining professional and family roles	50,0%	62,5%	62,5%
Lack of confidence in one's own leadership competencies	25,0%	50,0%	50,0%
Institutional restrictions (rules, company policies)	-	25,0%	25,0%

The data obtained allows us to assert that women's career barriers are formed at the intersection of three levels: macro, meso, and micro.

Table 2.

Distribution of barriers to women's career growth at the macro-, meso- and micro-levels.

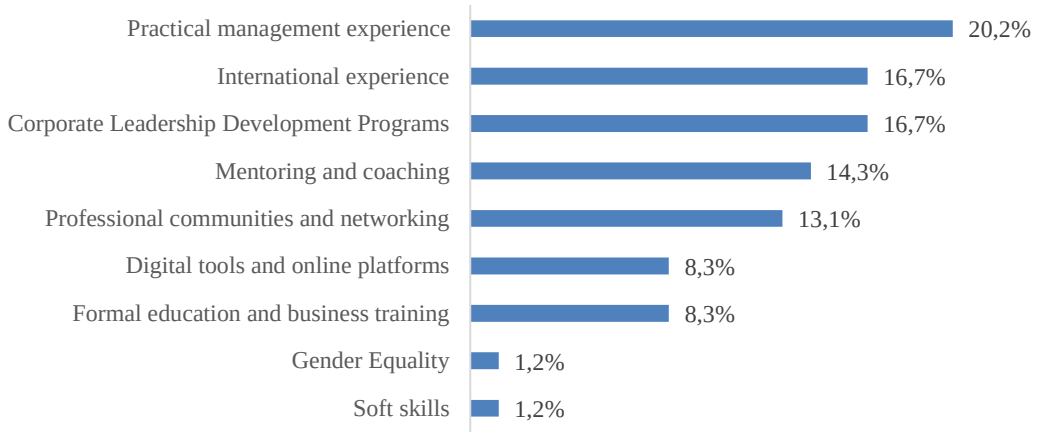
Level of analysis	***Contents of barriers***
Macro level	gender norms and stereotypes
Mesolevel	organizational practices and institutions
Micro level	internalized attitudes and confidence

The table demonstrates the multi-layered nature of barriers to women's career advancement. Structural,

institutional, and individual factors mutually reinforce each other, creating mechanisms of gender inequality and unfairness between genders.

The data obtained show that respondents understand the development of women's leadership skills as practical experience and organizational involvement. Management experience, corporate programs, and international mobility play a key role. It indicates a shift toward a practice-oriented model of leadership development. At the same time, digital tools, soft skills, and the gender agenda are paid less attention despite their central place in modern leadership theories. It also highlights a gap between normative notions of leadership and actual development practices.

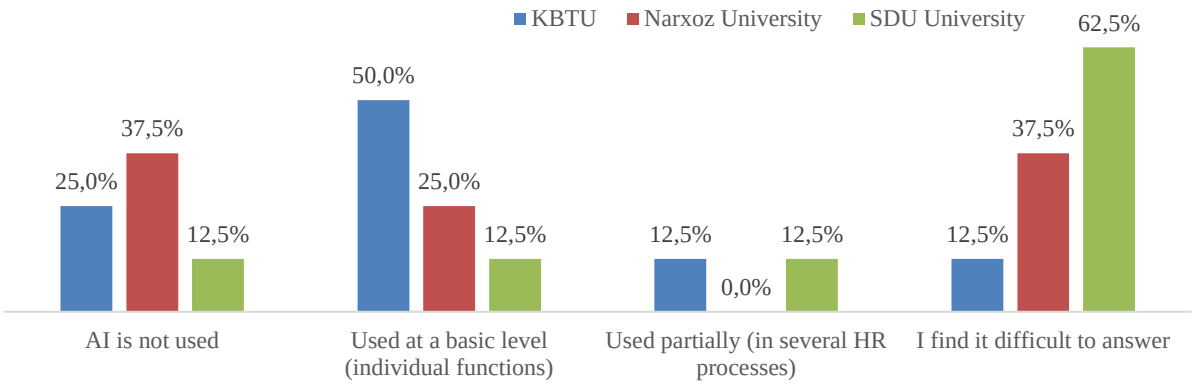
Figure 2.
What sources of leadership development do you consider most effective for women?



The data obtained indicate that the implementation of artificial intelligence in HR practices is in its early stages of development and is characterized by a high degree of heterogeneity both between and within organizations. Overall, 25.0% of respondents do not use AI, 29.2% use it at a basic level, 8.3% use it partially (in a few processes), and 37.5% were undecided. KBTU shows half of its users apply fundamental AI tools (50%), indicating the presence of a basic digital within HR systems. Narxoz University is characterized by a polarized distribution, one group skips AI entirely (37.5%), another equally large portion simply does not know its application (37.5%). SDU University is characterized by most people hesitating (62.5% of respondents were undecided), which might reflect unclear communication, a lack of transparency in digital HR practices or missing tech in personnel management.

The implementation of AI in HR policy is in a transitional phase, between declarative digitalization and the actual practice of its use.

Figure 3.
How do you rate the current level of use of AI tools in your organization's HR policies?



Analysis of the distribution of responses across organizations reveals that the perceptions and

intended functions of AI tools in HR policy are institutionally determined. In one organization, AI is primarily associated with career analytics and recruitment tools (62.5% each), followed by learning support and digital assistants (50.0% each), indicating a focus on using AI in managerial and analytical tasks related to decision-making and career trajectory support. In the second group, AI is seen as a means of personnel hiring and assessment, as shown by high values for recruitment (75.0%) and judging skill levels (62.5%), with relatively less attention paid to development and career support tools. In the third group, the stress is shifted toward using AI for training and development (62.5%) and potential assessment (62.5%), while actual hiring tasks drop sharply (12.5%), indicating that AI is perceived primarily as a resource for skills development and professional growth.

Table 3.

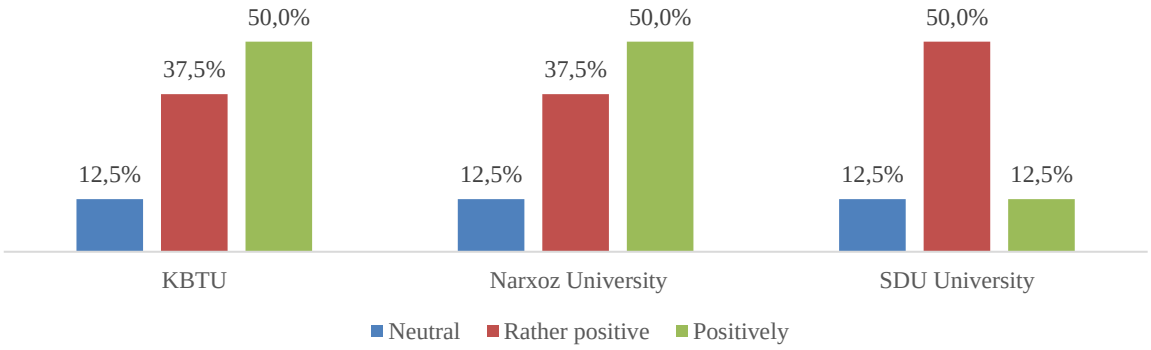
Which AI tools do you think are most effective for identifying and developing women's leadership potential?

	KBTU	Narxoz University	SDU University
AI-based resume selection and analysis systems	62,5%	75,0%	12,5%
Competency and potential assessment tools	37,5%	62,5%	62,5%
Personalized learning and development platforms	50,0%	50,0%	62,5%
Career planning and talent analytics	62,5%	37,5%	37,5%
HR chatbots and digital assistants	50,0%	25,0%	12,5%
Bias and Gender Balance Analysis Tools	12,5%	12,5%	-
I find it difficult to answer	-	-	12,5%

Overall, most women in leadership roles see AI as tool used in hiring, promotions and career growth in a favorable light. Still, opinions differ widely based on company environment. According to the group studied, nearly four out of ten views the impact as clearly beneficial - positive (37.5%) and somewhat positive (41.7%) This suggests that many believe AI can make personnel decisions fairer and more efficient. Their views come from experience, shaped by working closely with digital systems in managing people and understanding of the important role of digital technologies in human resources management.

Figure 4.

How do female managers generally perceive the implementation of AI tools in the assessment, promotion, and career development processes?

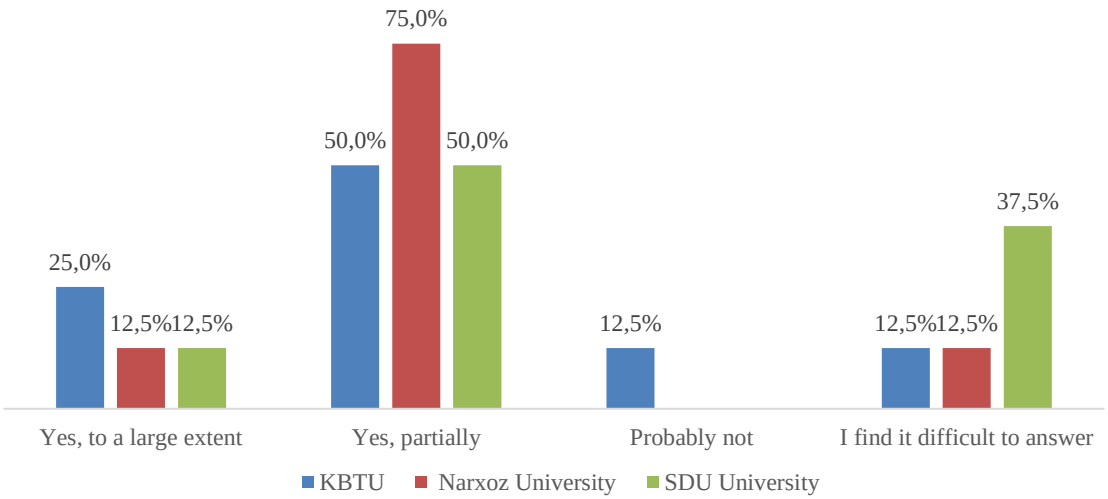


** Note: For clarity, the "I don't know" category is not shown in the diagram.*

The study results show that female leaders tend to see promise in artificial intelligence when it comes to making company leadership more open and balanced. Of the total sample, 16.7% believe AI can contribute significantly to this, while the majority (58.3%) think it might help, but only to some extent. Only a small fraction doubts its role altogether (4.2%). However, there is relatively high proportion of those who were undecided (20.8%). This indicates persistent uncertainty in assessing the actual effects of AI

implementation. It may reflect both limited practical experience with its use and the difficulty of interpreting its impact on management processes.

Figure 5.
Can the use of AI contribute to greater transparency and fairness in corporate governance?



The study results show that female executives view the potential of AI in HR policy as most achievable in training, assessment, and talent pool development, while its use in career development is assessed much more cautiously.

Taken together, the data suggests that training and development is a priority area for AI application (up to 87.5%), reflecting a perception of technology as a tool for personalization and increased effectiveness of professional development. Performance assessment (up to 50%) is also seen as a significant area where AI can improve the objectivity of procedures. Talent pool development demonstrates high importance in some organizations (up to 75%). It indicates the use of AI for strategic HR tasks. Hiring shows mixed interest rating (37.5% across all organizations). That indicates recognition of its potential, but not its dominant role. Career advancement remains the least supported area (12.5%), indicating limited trust in AI in decision-making affecting status and sensitive management aspects.

The differences revealed show that some organizations (e.g., those with a high percentage of talent pools) view AI as a strategic talent management tool, while others focus on training and development, reflecting a more "soft" integration of technologies. In all cases, however, there is a cautious attitude toward the use of AI in career advancement.

Table 4.
In which processes are this most possible?

	KBTU	Narxoz University	SDU University
Recruitment	37,5%	37,5%	37,5%
Evaluation of effectiveness	50,0%	37,5%	50,0%
Career advancement	12,5%	-	12,5%
Formation of a personnel reserve	75,0%	25,0%	25,0%
Training and development	62,5%	87,5%	50,0%
I find it difficult to answer	-	-	12,5%

An analysis of respondents' open-ended responses revealed key criteria for assessing the effectiveness of AI tools in developing women's leadership. Unlike closed questions, these responses reflect an expert understanding of the multidimensional nature of this process. The indicators proposed by respondents can be grouped into several interrelated categories. First, great attention is paid to career quantitative indicators. It includes increased representation of women in leadership positions, career advancement, and a narrowing gender gap. Second, a focus on individual development is highlighted,

focusing on developing leadership competencies, increasing confidence, and developing soft skills. Third, respondents emphasize the importance of organizational effects, such as shifting workplace norms, seeing more women in leadership roles. Special attention is paid to process characteristics, including how deeply teams get involved and how often they rely on AI tools. Furthermore, a significant area of focus is assessing whether AI behaves fairly, makes choices that can be understood, and earns real confidence from users. Finally, the role of accessibility and inclusiveness is highlighted. It reflects the ability of AI to reduce structural barriers and expand opportunities for women.

Findings

The study sample was conducted across three educational institutions: KBTU (33.3%), Narxoz University (33.3%), and SDU University (33.3%). This ensures balance and allows the results to reflect the diverse organizational contexts.

An analysis of the distribution of responses across universities KBTU, Narxoz University, and SDU University) revealed both general patterns and significant institutional differences in the perception of women's leadership factors. The most significant factors overall are level of education and professional training (up to 87.5% at KBTU; 75.0% at Narxoz; 62.5% at SDU), and personal qualities (confidence, initiative) (up to 100% at Narxoz; 87.5% at KBTU; 62.5% at SDU). Every institutions, puts a consistent emphasis and weight on personal strengths. Narxoz (100%) is particularly indicative. Leadership there is presented entirely through the prism of personal characteristics and reflects a pronounced meritocratic approach.

The analysis of the survey demonstrates that respondents perceive women's leadership as the result of a combination of individual resources, organizational conditions, and weakly defined digital and network mechanisms. Gender inequality in leadership is reproduced not through individual barriers, but through their combination. Cultural norms, institutional practices, and individual attitudes affect each other.

Women's leadership is formed primarily through practice and institutional mechanisms. But digital resources and soft skills remain secondary and play smaller roles and matter so little. It is particularly important to emphasize that the low significance of digital tools and soft skills points to a structural gap between new ideas about theories on leading and what really happens in practice.

Even though AI could help streamline HR tasks and lessen gender gaps, it often sits unused or only partly applied. Instead of reshaping how gender dynamics play out at work, current AI efforts mostly track employee performance, which means little progress emerges in advancing female leaders. The use of AI in HR policy is focused mostly on human capital management rather than on transforming gender relations, limiting its potential in women's leadership development.

Most women in leadership roles see AI in HR work positively. Still, their actual experience with the technology shapes their views less. This confirms the gap between the positive perception of digitalization and its actual level of implementation in organizations. The survey results also demonstrate that AI is viewed by the expert community as a significant, but not universal, tool for increasing the transparency and fairness of corporate governance, the effectiveness of which is determined by the quality within existing systems.

AI is perceived as an effective and helpful tool for streamlining routine HR tasks and processes. Most people see AI as being used in strategic decisions, such as career advancement. Thus, the effectiveness of AI in developing women's leadership is viewed by respondents as a multidimensional phenomenon. It also includes not only career outcomes but also individual, organizational, and ethical issues.

At the same time, significant differences and clear gaps between universities in the degree of support for AI implementation were identified. Some organizations within 3 universities demonstrate a more positive position. Others demonstrate a more reserved and a higher degree of uncertainty. This may indicate differences in institutional maturity, the degree of adoption of digital solutions, and the level of critical reflection regarding their application.

To sum up, A cross-organizational analysis reveals differences in the degree of the assessments. Some organizations are more confident regarding the effectiveness of AI (specifically, a higher proportion of "to a large extent" responses), while others are more cautious, expressed as "partially," or express greater uncertainty. And it demonstrates the heterogeneity of institutional experience in implementing digital

technologies and differences in the level of trust in them.

The authors of the article based on the findings resulting from the survey and analysis of the literature review suggests strategies of using AI to support women leaders and enhance their visibility and in HR policy. The proposed recommendations for practical implications are aimed at inclusive leadership of women and help them become leaders and manage their careers. To make some changes to how universities use their resources in HR policy it is necessary to expand institutional resources for developing women's leadership and career management. The following practical recommendations for integrating AI into the HR policies of higher education institutions are proposed.

First of all, AI can be used to make sure everyone is treated fairly and has the same chances to succeed by means of using artificial intelligence to check if there is any bias in hiring, evaluating and promoting people and making sure everyone knows how their career is going.AI tool can be effective for ensuring equal career opportunities via including algorithms for analyzing gender balance in hiring, assessment, and promotion processes, auditing personnel decisions for hidden gender issues, and ensuring career trajectory transparency.

AI tools also should be used in a fair way by being open and honest through applying "ethical AI" to HR policies based on principles of transparency and non-discrimination in algorithms and developing internal regulations for the use of AI in HR decisions.

Using AI will be helpful to eliminate gender inequality through analyzing differences in pay, career dynamics, and access to leadership positions. Artificial intelligence can help get rid of the differences between men and women by looking at how people are paid how their careers are going and if they have a chance to become leaders.

The results of investigation also demonstrate that universities should integrate digital and soft skills into leadership development models through developing digital literacy, managing AI tools, and analytical thinking in leadership development programs as well as developing soft skills based on digital simulations and AI coaching. Universities can use AI platforms to find mentors and plan their careers by using artificial intelligence to find and develop talented people and use gender diversity indicators in HR management policy.

It is also helpful to launch pilot HR projects for the AI practical application, creating a digital culture for the AI successful use in developing women's leadership. Artificial intelligence can create a culture where people feel comfortable using AI to help women become leaders. Using HR metrics can be also effective in evaluating the effectiveness of AI implementation as an indicator of gender effectiveness, such as the proportion of women in the talent pool and in leadership positions, and women's participation in digital leadership programs. The integration of AI into HR policy should be viewed as a tool for the institutional transformation of the organizational environment. Using AI in human resources is not just about using new technology, it is about changing how the whole organization works.

Conclusion

The conducted research has demonstrated that the use of AI technologies make a complex and multifaceted influence on the administration functioning, shaping innovative methods of decision-making, personnel development, and HR strategy formation. Having women leaders is really important because it makes sure that everyone has an opportunity to make decisions which leads to new ideas. This paper also suggests that, despite the general focus on human capital assessment and development tools in women’s leadership, the functional understanding of AI varies depending on the organizational context, from a selective-evaluative logic to a managerial and developmental one, reflecting differences in institutional priorities and the level of digital maturity of organizations. Encouraging and elevating women into leadership based on AI tools is crucial for creating a more balanced, equitable, and forward-thinking educational system. Studies done displays that in universities women get stuck with jobs that help others but don't get the recognition they deserve. In the field of AI, there are many ongoing challenges faced by women. Despite their contributions, women remain underrepresented in leading positions.

Study results demonstrates that women who are leaders in institutions especially in technology and artificial intelligence they point out how important it is to be an inclusive leader and they talk about the challenges of being seen and recognized and the need to be careful when it comes to changing technology.

When AI is introduced, it can make female specialists feel anxious about technology and worried that their experience and knowledge are not valued much. The author of the article comes to conclusion that management practices and career advancement mechanisms for developing women's leadership can be realized through a combination of digital solutions and AI potential. This approach can ensure a transition from the fragmented use of AI to its strategic integration into HR policy. A metrics system will allow educational institutions to evaluate not only the effectiveness of automation but also the contribution of AI to the development of inclusive leadership. Furthermore, the use of "ethical AI" in HR policy will reduce the risk of institutional barriers through digital systems. Based on the data obtained, specific recommendations for the implementation of AI in HR policy of higher education institutions to developing women's leadership have been proposed. So, the effectiveness of AI in promoting gender equality and women's leadership is highlighted through its ability to support fair hiring, evaluation, promotion, and career development processes. AI can help reduce bias, improve transparency, and analyze gender gaps in pay, leadership opportunities, and career growth. Ethical and transparent use of AI in HR policies is essential to ensure non-discrimination and fairness. The research also shows that universities and organizations can effectively use AI to develop digital, analytical, and leadership skills, support mentorship, and identify talented women leaders. In addition, pilot HR projects, digital culture development, and HR metrics can help measure the success of AI implementation in improving women's leadership. The results of the research can be successfully integrated into the HR policy of higher education institutions to develop women's leadership.

Conflict of Interest Statement

The authors declare no potential conflicts of interest regarding the research, authorship, or publication of this article.

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Author Contributions

Akybaeva Gulvira.: Conceptualization, Methodology, Supervision, Proofreading. Burbekova Saule: Data Collection and Curation, Resources, Validation, Writing –Review and Final Editing. Mukushev Medet: Literature Review, Data Analysis, Visualization, Writing –Original Draft, Editing.

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