Translating Nepal's National AI Policy into Action: Strategic Roadmap for Education, Industry, Infrastructure, and Digital Diplomacy

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ABSTRACT

Artificial intelligence is fundamentally transforming Nepal's socio-economic landscape, with far- reaching implications across diverse sectors. Recognizing this transformative potential, the Government of Nepal published an AI Concept Paper in 2024, followed by the National AI Policy in 2025. However, translating policy frameworks into tangible outcomes requires developing comprehensive short-term and long-term AI strategies that deliver public value. Education, digital infrastructure, industry, and digital diplomacy emerge as pivotal sectors where AI can advance national interests, accelerate sectoral development, and address critical cybersecurity challenges. This study examines AI-driven opportunities and risks across four key domains: industrial value chains, education, digital infrastructure, and digital diplomacy. Each sectoral analysis explores current conditions, potential use cases, associated risks, and emerging opportunities for AI integration. This study employed a multi-method approach combining extensive desk reviews, iterative report evaluations, focused group discussions, and stakeholder consultations. This methodology incorporates diverse perspectives and draws upon global best practices in AI adoption to ensure comprehensive and contextually relevant findings. The study reveals that each sector requires a holistic and adaptive framework that integrates customized AI implementation strategies, proactive risk management strategies, sustainable funding mechanisms, and robust evaluation systems. Critical priorities identified across sectors include enacting data privacy legislation, investing in workforce upskilling programs, developing essential digital infrastructure, implementing AI risk mitigation protocols, strengthening digital diplomacy capabilities, and enhancing cybersecurity measures. These interconnected priorities collectively shape Nepal's evolving position within the global AI ecosystem and determine its capacity to leverage AI for inclusive development. This study provides policymakers with strategic insights, evidence-based analysis, and practical implementation tools to formulate effective AI policies, address critical infrastructure and governance gaps, and foster inclusive capacity building across sectors.

1. INTRODUCTION

Nepal is embarking on an ambitious journey to shape its future through the strategic implementation of a national AI policy. Recognizing the transformative potential of artificial intelligence in driving socio-economic growth, the Ministry of Communication and Information Technology (MoCIT) published a AI concept paper on June 30, 2024 [1] outlining the use and practice of AI to establish a foundation for developing relevant policies and legislation. Subsequently, the National AI Policy of Nepal [2] was published on August 14, 2025, marking a significant step toward guiding the ethical use, regulation, and advancement of AI across diverse sectors.

This study explores the multifaceted implications of Artificial Intelligence (AI) across four critical domains—Education, Industry, Digital Diplomacy, and Policy Infrastructure—each representing a fundamental pillar of Nepal's evolving AI ecosystem. Together, they provide a holistic understanding of how AI can serve as a transformative force for national development, innovation, and governance. The AI in Education study examines how AI technologies are reshaping teaching, learning, and skills development across educational institutions. It emphasizes institutional readiness, the importance of equitable access, and the challenges posed by the digital divide. By assessing the integration of AI in classrooms and curricula as in [3] the study highlights both opportunities for personalized learning and the need for digital infrastructure and teacher training to support effective adoption. The AI effect analysis on Industry Value Chain study analyzes the influence of AI on industrial productivity, innovation, and workforce transformation as recommended by [4-6]. It explores how automation, data-driven decision-making, and intelligent manufacturing can enhance efficiency and competitiveness. At the same time, it underscores the urgency of reskilling and upskilling workers to adapt to rapidly changing economic conditions and to prevent

workforce displacement. There are several news regarding the importance of digital diplomacy in Nepal [7,8]. The Digital Diplomacy component investigates how AI is transforming international relations and governance. It focuses on the growing importance of AI in diplomatic engagement, cybersecurity defense, and global cooperation. The study highlights Nepal's need to strengthen its digital diplomacy capabilities as discussed in [9] to effectively participate in global AI governance and safeguard national interests. Finally, the Policy Infrastructure study evaluates the state of Nepal's digital infrastructure, data governance frameworks, and cybersecurity systems. It identifies critical policy and regulatory gaps that may hinder responsible AI development and proposes actionable interventions to enhance institutional coordination, data protection, and digital resilience. Together, these four studies provide a comprehensive foundation for shaping Nepal's National AI Strategy— bridging technological potential with policy readiness, and ensuring that AI contributes to inclusive, secure, and sustainable national growth.

We examined four key sectors, analyzing their existing scenarios, challenges, and opportunities in adapting Artificial Intelligence (AI). Throughout the process, we collaborated with multiple stakeholders and integrated their insights and recommendations into a unified strategic framework. Continuous engagement with government and non-government agencies was maintained to foster trust, ensure policy alignment, and strengthen coordination toward achieving national AI objectives.

Drawing upon expert consultations, literature reviews, and contextual analysis, these studies offer a comprehensive assessment of Nepal's readiness for AI integration. They identify key strengths, constraints, and opportunities within each sector, ultimately contributing to an actionable roadmap for implementing Nepal's National AI Strategy. Collectively, this work provides both analytical depth and practical guidance—bridging academic insight with policy relevance—to support Nepal's strategic vision for an inclusive, secure, and innovation-driven AI future.

2. SCOPE OF WORK

2.1 Review of Sectoral Studies

The research was meticulously designed to ensure the quality, relevance, and coherence of the four sectoral studies. This was achieved through a comprehensive, multi-faceted review process focusing on four critical areas. First, the process involved a rigorous Assessment of each study's technical foundation, which included evaluating the quality of the research design, data collection methodologies, and analysis methods employed. This ensured that the conclusions drawn were structurally sound and scientifically credible. Concurrently, the review focused on Content Quality, examining the studies' findings and recommendations to confirm they were evidence-based, highly relevant to the local context, and appropriately aligned with Nepal's overall AI readiness goals. Beyond quality checks, the process prioritized iterative improvement. This involved providing Constructive Feedback, which offered detailed critiques aimed at enhancing the clarity of the presentation, increasing the depth of the analysis, and strengthening the practical implications of each study's recommendations. Finally, Cross-Sector Considerations were paramount to the design. This step ensured that the studies did not exist in silos but rather incorporated broad perspectives that would enable policy coherence, strategic alignment, and synergy across the different sectors being examined. Through this entire rigorous review process, the overarching goal was to provide valuable, grounded insights and actionable recommendations that would directly support the development of a robust and effective national AI strategy for Nepal.

2.2 Fostering Cross-Sector Collaboration

To ensure a cohesive and well-integrated approach, we undertook a series of coordination activities aimed at fostering collaboration among sectoral study teams and key stakeholders. These efforts were focused on streamlining research methodologies, resolving inconsistencies, and aligning recommendations to support a unified national AI strategy. Through these coordinated activities, we strengthened cross-sector collaboration, improved research integration, and ensured that AI policy recommendations reflect a unified and strategic approach to fostering AI-driven growth and innovation in Nepal.

We organized virtual meetings with each sectoral study team, providing a structured platform to present interim findings, identify overlapping themes, and refine study integration. These discussions enabled teams to exchange ideas, address methodological differences, and ensure that research findings were coherent and aligned with national AI policy objectives. The real-time feedback from these sessions was instrumental in resolving discrepancies and enhancing the clarity of sector-specific insights.

In addition to virtual discussions, we participated in in-depth workshops and meetings that brought together researchers, industry experts, policymakers, and other key stakeholders. These sessions facilitated open dialogue, collaborative problem-solving, and the exchange of best practices. By addressing inconsistencies across studies, stakeholders collectively refined recommendations, ensuring they were practical, actionable, and aligned with both national priorities and international AI governance frameworks.

We served as a bridge between the Ministry of Communication and Information Technology (MoCIT) and e-governance board (EGB), the sectoral research teams, and academic institutions, ensuring that the studies adhered to both MoCIT's strategic vision and rigorous academic standards.

3. METHODOLOGY

3.1 Desk Review

The desk review evaluates Nepal's AI-driven digital ecosystem by analyzing existing research, reports, and national policies. It examines the country's ICT and AI landscape, covering policy frameworks, regulatory measures, and international best practices. The study assesses internet connectivity, data centers, cloud services, and data policies, emphasizing privacy, security, and data quality—key factors for AI development. Additionally, it explores Nepal's ICT history, AI policies, and governance structures, comparing them with global standards

to identify gaps and opportunities [10,11]. The findings provide a structured foundation for understanding Nepal's digital infrastructure and its alignment with AI ecosystem growth.

Scholars and policymakers have investigated ways to help states devise foreign policy, national security strategies, and diplomatic strategies that address these challenges, opportunities, and role of AI in global affairs. The literature review [12-14] on impact of AI on industry value chains shows that AI technologies are transforming industry value chains, leading to job displacement, job creation, and reskilling requirements. In the education sector, the application of artificial intelligence has expanded beyond the traditional notion of AI as a supercomputer to encompass embedded computer systems [3]. A key objective of AI in education is to deliver personalized learning support tailored to each student's learning progress, preferences, and individual characteristics [15,16].

3.2 Data Collection

The research questions and survey instruments were developed based on gaps identified during the desk review and the defined research scope, ensuring a focused and targeted approach to data collection. These tools formed the foundation for gathering both qualitative and quantitative insights into Nepal's AI-driven digital ecosystem.

Primary data collection played a crucial role in capturing first-hand perspectives on the current state of AI, digital infrastructure, and data policies in Nepal. This process involved direct engagement with key stakeholders, including government officials, industry leaders, academics, civil society representatives, and regulatory bodies, through surveys, focus group discussions (FGDs), and key informant interviews (KIIs). Such interactions helped identify policy gaps, challenges, and opportunities while providing a holistic understanding of AI adoption and its impact on Nepal's economic and technological landscape.

Surveys were employed to collect quantitative data from a broad range of stakeholders, ensuring representation across sectors. The responses offered valuable insights into AI awareness, adoption levels, regulatory challenges, and infrastructure readiness, forming a critical basis for subsequent analysis. To develop comprehensive AI strategy and policy recommendations, multiple FGDs were conducted with stakeholders from diverse sectors. These discussions provided a collaborative platform for addressing key concerns, ensuring that policy recommendations reflected balanced viewpoints. The FGDs also facilitated the integration of technical, ethical, and regulatory considerations into Nepal's AI policies, promoting informed and inclusive decision-making.

The study employs a mixed-methods approach, including desk reviews and stakeholder consultations. For the industry value chain research, data were collected through 25 Key Informant Interviews, Focus Group Discussions with 31 participants, and structured surveys administered to 278 respondents. In the context of AI in education, surveys targeted 1,000 students, 150 faculty members, and 50 administrators across the Kathmandu Valley. For digital infrastructure development, surveys captured quantitative data from a broad range of stakeholders to ensure diverse representation across sectors. A total of 223 participants took part, representing government agencies, private sector organizations, regulatory bodies, technical communities and associations, research institutes, academia, civil society organizations and media, NGOs/INGOs, consultants, students and end users, and other relevant stakeholders. The survey responses provide valuable insights into AI awareness, adoption levels, regulatory challenges, and infrastructure readiness, forming a critical foundation for further analysis.

3.3 Stakeholder Consultation

A central component of this research was extensive stakeholder consultation, aimed at ensuring that the study captured diverse perspectives and produced practical, actionable recommendations for Nepal's AI ecosystem. Engaging stakeholders provided first-hand insights into the current state of AI adoption, regulatory frameworks, infrastructure readiness, and sector-specific challenges, while also identifying opportunities for strategic interventions. We convened both in-person and virtual meeting with various stakeholders from government and non-government organization to promote collaboration and ensure the coherence of their interim findings.

The consultation process involved multiple approaches. Key informant interviews were conducted with government officials, policymakers, industry leaders, academics, and representatives from civil society and regulatory bodies. These interviews offered in-depth perspectives on policy gaps, technological barriers, and sectoral priorities. Focus group discussions (FGDs) brought together participants from different sectors to foster interactive dialogue, enabling stakeholders to discuss shared challenges, exchange best practices, and collaboratively refine recommendations.

In addition, workshops and thematic meetings were organized to validate findings, discuss interim results, and align recommendations with national priorities and international AI governance standards. These forums provided stakeholders with opportunities to contribute their expertise, ensuring that the research outputs reflected balanced viewpoints and addressed technical, ethical, and regulatory considerations.

Through this structured stakeholder consultation process, the research achieved a holistic understanding of Nepal's AI landscape, strengthened cross-sector collaboration, and ensured that policy recommendations were relevant, inclusive, and implementable, supporting a coherent and strategic national AI roadmap.

4. RESULT AND DISCUSSION

This study identifies and analyzes four cross-sectoral considerations fundamental to developing effective AI policy and strategy in Nepal. Our research explores the transformative potential and implementation challenges of artificial intelligence across four pivotal domains: AI in education, digital infrastructure readiness, effects of AI on industry value chains, and digital diplomacy. These sectors represent critical pillars where AI integration can advance national interests while requiring coordinated policy frameworks that address sector-specific needs within a coherent national strategy.

4.1 AI in education

The study AI in Education explores the role and impact of

artificial intelligence on education and skills development in Nepal, with a focus on institutional readiness, faculty preparedness, and student engagement. Using a combination of surveys with administrators, focus group discussions involving education leaders and industry professionals, and data analysis, the study provides a comprehensive overview of the current educational landscape. The findings reveal that around 70% of students view AI as a useful tool for organization and learning enhancement, while faculty members recognize its potential but stress the need for institutional support, structured training, and policy backing. Industry representatives further emphasize the importance of aligning AI education with evolving market needs.

The report underscores the urgency of ensuring equitable access to AI tools and reliable internet connectivity in all classrooms, particularly in rural and underserved areas. It calls for updated and enforceable AI-specific policies to advance AI education and innovation nationwide. However, several limitations are evident, including a small and geographically narrow sample size, minimal involvement of teachers, parents, and education experts, and an urban-centric focus—mainly around Kathmandu. The study also lacks essential statistical data on AI courses, student enrollment, infrastructure, instructor availability, and projected graduate output, which are crucial for informed policy and strategy development. Additionally, it overlooks key aspects such as teacher training, curriculum enhancement, risk mitigation, and integration of international best practices, while failing to identify sustainable funding mechanisms.

To enhance future research, the study recommends adopting a more inclusive and methodologically robust approach that ensures geographical representation, diverse stakeholder participation, and a clearer framework for assessing institutional readiness. Strengthening these areas will be vital for effectively integrating AI into Nepal's education system and building a future-ready workforce.

4.2 Digital Infrastructure Readiness for AI

The study on Nepal's digital ecosystem provides an in-depth exploration of the country's ICT history, existing policies, AI practices, data privacy measures, digital infrastructure, and alignment with international benchmarks. The analysis identified significant gaps in AI governance, data protection, cybersecurity, and infrastructure development, all of which pose challenges to the growth of Nepal's AI ecosystem. To capture a broad range of perspectives, the study employed surveys, focus group discussions (FGDs), and key informant interviews (KIIs) with stakeholders from various sectors. Insights from these engagements were systematically analyzed to ensure a holistic understanding of Nepal's AI landscape.

The findings underscore the need to strengthen legal frameworks for data privacy, establish cross- border data-sharing regulations, and promote AI education and workforce development. Addressing algorithmic bias, improving cybersecurity, and setting up robust regulatory oversight mechanisms are also vital to building a trustworthy AI ecosystem. The study recommends developing a national AI roadmap that outlines both short- and long-term goals, focusing on scalable digital infrastructure, regulatory governance, and ethical AI practices. Policies should support local data availability for AI-driven innovations and foster a research ecosystem tailored to Nepal's specific needs. A well-defined AI strategy—anchored in strong governance, public–private partnerships, and stakeholder collaboration—will be critical in positioning Nepal as a competitive player in the global AI landscape.

The report on AI Digital Infrastructure further emphasizes the importance of an integrated approach that incorporates sector-specific AI policies, data-sharing frameworks, enhanced data privacy laws, ethical AI standards, and inclusive workforce development. However, several limitations were noted, including a small and geographically unrecorded sample, lack of adherence to global research standards, and limited inclusion of defense and security institutions. The reliance on self-reported data also limits the objectivity of findings. Moreover, the report does not clearly define national AI priority sectors, lacks sufficient integration of international best practices, and omits sector-specific risk assessment methodologies and funding strategies. Additionally, it fails to address high-risk sector contexts relevant to Nepal. Strengthening these areas will be essential for developing a comprehensive and future-ready AI digital infrastructure strategy.

4.3 Industrial value chain optimization using AI

The study on the effects of AI on industry value chains examines the implications of artificial intelligence for employment, automation, and reskilling in Nepal. It identifies sectors most vulnerable to job displacement due to automation and proposes strategies to support workforce adaptation and inclusive growth. Using a mixed-methods approach—including desk reviews, stakeholder consultations, and structured surveys—the study provides a comprehensive analysis of AI's impact on different sectors. It highlights that marginalized communities, particularly those with limited digital literacy and access to technology, are at greater risk of being left behind. Sectors characterized by high routine and low-skilled tasks are identified as the most susceptible to displacement, while new opportunities are emerging in high-skilled domains such as healthcare, finance, and AI development. The Effects of AI on Industry Value report underscores AI's transformative potential across Nepal's industrial sectors and recommends targeted initiatives such as reskilling programs, ethical AI frameworks, public–private partnerships, AI infrastructure development, and faculty capacity building. It emphasizes the need for strong collaboration among industry, government, and educational institutions to ensure effective AI integration and workforce preparedness. However, the report's scope is limited by a small and geographically unrecorded sample, lack of adherence to international survey standards, and an overemphasis on the IT sector—while underrepresenting agriculture, tourism, and labor-intensive industries. Furthermore, it does not clearly define Nepal's AI priority sectors or adequately address issues of job displacement, workforce adaptation, and the potential impact on remittance flows. The absence of comprehensive data on AI adoption, sector- specific risk assessments, international best practices, and funding mechanisms further limits its policy utility. Future research should adopt a broader and more inclusive approach, incorporate detailed risk assessments and clearly define

stakeholder roles to support sustainable and equitable AI-driven industrial transformation in Nepal.

4.4 Digital Diplomacy

The Digital Diplomacy study explores the implications of artificial intelligence (AI) on national security, geopolitics, and foreign policy, providing an in-depth overview of the global AI policy landscape and international cooperation mechanisms. It examines how AI is reshaping geopolitical rivalries and influencing international relations, with particular attention to what these shifts mean for Nepal's national security and foreign policy. The study also analyzes Nepal's existing AI landscape and offers targeted policy recommendations to strengthen the country's AI diplomacy. The research adopted a qualitative approach, combining an extensive review of academic literature, government documents, reports from non-governmental and multilateral agencies, and media sources. It also incorporated semi-structured interviews, focus group discussions, and case studies of five key international actors—the United States, China, India, the European Union, and Bangladesh. The findings highlight a polarized global AI ecosystem, largely divided between the US/Western bloc and China, while identifying opportunities for Nepal to engage in international cooperation on AI development, regulation, and ethical governance. The study also explores the intersection of AI with cybersecurity and national security, emphasizing the growing importance of diplomatic readiness in the AI era.

The Digital Diplomacy report recommends that Nepal enhance its AI diplomacy through three strategic pillars: knowledge transfer, coordination on data protection, and promotion of innovation—all supported by a participatory and inclusive policy development process. However, several limitations were noted, including a small and under-documented interview sample, lack of defined participant roles, and the absence of comprehensive frameworks for national interests, cybersecurity, and AI applications in diplomacy. The report also does not establish parameters for maintaining geopolitical neutrality or strategies for leveraging AI in diplomatic practice. Furthermore, it lacks a risk assessment framework for digital diplomacy and fails to identify associated risk factors.

To advance Nepal's AI diplomacy, future research should emphasize both "AI for Diplomacy"— the use of AI technologies to enhance diplomatic processes—and "Diplomacy for AI"—the use of diplomatic channels to foster AI development and innovation. A stronger assessment of Nepal's AI readiness, informed by its digital infrastructure and alignment with international best practices, will be essential for shaping an effective and forward-looking AI diplomacy strategy.

4.5 Limitations and Recommendations

The four sector-specific studies on the effects of AI adoption place strong emphasis on quantitative data, primarily to support qualitative insights and ensure alignment with global best practices. Future research should develop detailed implementation strategies, including clear frameworks for resource allocation and monitoring. The studies also require more comprehensive recommendations for curriculum development and teacher training, emphasizing specific AI skills. Alignment with international standards—particularly regarding data privacy and cross-border data sharing—needs to be more explicitly articulated, and practical resource requirements, including funding and technical expertise, should be clearly defined. The analysis of emerging AI technologies, such as generative AI, should be strengthened, alongside improvements in data availability, quality, and ethical governance frameworks. Greater international collaboration and benchmarking against global standards are essential. The studies are further limited by the absence of a pre-study AI readiness index, lack of adherence to international survey standards, and insufficient documentation of data sources, participant demographics, and geographical coverage. Additionally, the small and unrepresentative data samples reduce the generalizability of findings, while the studies fail to clearly outline their limitations and provide guidance for future research directions.

To enhance the quality of future research and policy development, several key methodological improvements are recommended. First, the development and integration of an AI Readiness Index would enable a comprehensive, cross-sectoral assessment of Nepal's current capabilities, helping to identify priority areas for intervention. Second, survey methodologies should be standardized and aligned with established international frameworks—such as the UNESCO guidelines—to strengthen data validity, reliability, and comparability. Third, ensuring data transparency through detailed documentation of data sources, participant demographics, and geographical coverage is essential for promoting research integrity and reproducibility. Finally, future studies should clearly outline their limitations and propose specific, evidence-based recommendations to guide subsequent research efforts and address existing knowledge gaps effectively.

5. CONCLUSION

The four sector-specific studies on the effects of AI in education, industry value chains, digital infrastructure, and diplomacy provide a comprehensive understanding of Nepal's current AI landscape, highlighting both opportunities and challenges for sectoral development and national policy formulation. In education, AI shows potential to enhance personalized learning, improve organizational efficiency, and strengthen skill development, but gaps in curriculum, teacher training, and equitable access—particularly in rural areas—need urgent attention. In the industry value chain, AI adoption can drive productivity, innovation, and high-skilled employment, yet issues such as job displacement, workforce reskilling, sector prioritization, and alignment with global best practices require structured strategies and stakeholder coordination. The digital infrastructure study underscores the necessity of robust data governance, ethical frameworks, inclusive policies, and cross-institutional collaboration, while identifying critical weaknesses in AI readiness, data quality, and infrastructure scalability. Finally, in digital diplomacy, AI is emerging as a tool for enhancing Nepal's international engagement, knowledge transfer, and innovation promotion, but gaps remain in strategic frameworks, risk management, neutrality, and alignment with international norms. These studies emphasize that Nepal's AI ecosystem requires a cohesive and cross-sectoral approach, combining policy alignment, workforce development, infrastructure investment, and ethical governance. Strengthening institutional capacity,

adopting standardized methodologies, and fostering international collaboration will be crucial to leveraging AI effectively. By addressing these gaps and building on identified opportunities, Nepal can position itself to harness AI for sustainable development, economic growth, and strategic global engagement.

AUTHOR CONTRIBUTIONS

All the authors contributed equally.

CONFLICT OF INTEREST

The author declares no known conflicts of interest.

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REFERENCES

[1] Government of Nepal, AI concept paper (2081). https://mocit.gov.np/content/12663/12663nepal/

[2] Government of Nepal. (2024). National AI policy (2081). https://mocit.gov.np/content/13001/relations-of-artifacial-intelligence-policy-2081-to/

[3] L. Chen, P. Chen, Z. Lin, (2020). Artificial intelligence in education: A review. *IEEE Access*, **8** (2020) 75264-75278, 2020. https://doi.org/10.1109/ACCESS.2020.2988510.

[4] Y. Liang, The impact of artificial intelligence on employment and income distribution. Journal of Education, *Humanities and Social Sciences* (2024), https://doi.org/10.54097/2a7a8830

[5] L. Babashahi, C.E.Barbosa, Y. Lima, A. Lyra, H.S. dos Santos, M. Argôlo, M.A. de Almeida, J.M. de Souza, AI in the workplace: A systematic review of skill transformation in the industry. *Administrative Sciences*, **14** (6) (2014) 127. https://doi.org/10.3390/admsci14060127

[6] S.K. Lodhi, A.Y. Gill, I. Hussain, AI-powered innovations in contemporary manufacturing procedures: An extensive analysis. *International Journal of Multidisciplinary Sciences and Arts*, **3**(4) (2024) 15–25. https://doi.org/10.47709/ijmdsa.v3i4.4616

[7] A.R. Mulmi, Nepal needs to play catch-up. The Kathmandu Post December **9**, 2022). https://kathmandupost.com/columns/2022/12/08/nepal-needs-to-play-catch-up

[8] M. Shrestha, Artificial intelligence: Strategic tool in diplomacy. The Himalayan Times, (September 23, 2021). https://thehimalayantimes.com/opinion/artificial-intelligence-strategic-tool-in-diplomacy

[9] G.P. Aacharya, (Impact of artificial intelligence on new global order: A Nepalese security perspective. *Unity Journal,* (2024). https://www.nepjol.info/index.php/unityj/article/view/63189

[10] I. Rossomakha, O.N. Kyrylenko, A. Borysiuk, The impact of artificial intelligence on the labor market in the world and particularly in Ukraine. Ekonomìka, Fìnansi, Pravo, (2) (2024) 6. https://doi.org/10.37634/efp.2024.2.6

[11] International Telecommunication Union. (2024). United Nations activities on artificial intelligence (AI) 2023. ITU Publications.

[12] A. Zirar, S.I. Ali, N. Islam, Worker and workplace artificial intelligence (AI) coexistence: Emerging themes and research agenda. *Technovation*, **124** (2013) 102747.

[13] Danish Trade Union Development Agency. (2023). Nepal labour market profile 2022/2023. DTDA.

[14] H. Zhang, Economic impacts of generative artificial intelligence: A comprehensive review of the literature. *International Business & Economics Studies*, **6**(5) (2024) 69. https://doi.org/10.22158/ibes.v6n5p69

[15] G.J. Hwang, Definition, framework and research issues of smart learning environments: A context-aware ubiquitous learning perspective. *Smart Learning Environment,* **1** (2014) 4. https://doi.org/10.1186/s40561-014-0004-5

[16] Hwang, G. J., Xie, H., Wah, B. W., Gašević, D. (2020). Vision, challenges, roles and research issues of artificial intelligence in education. Computers and Education: Artificial Intelligence, https://doi.org/10.1016/j.caeai.2020.100001