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PEDAQOGİKA

THE CHALLENGE OF ARTIFICIAL INTELLIGENCE INTEGRATION IN HIGHER EDUCATION POLICY FORMATION AND PRACTICE.

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ABSTRACT
Artificial Intelligence (AI) contributes to the rapid transformation of higher education. While universities have leveraged technology in learning, instruction and general management, the impact of AI on policy formation and practice in higher education remains under-recognised. Specific literature illustrating the influence of Artificial Intelligence in policy formulation and practice is still unconsolidated, possibly due to accelerated innovations of various tools being witnessed. Significant attention has been paid to the effect of AI tools on the academic integrity of students and faculty work; however, the solutions proposed so far can not be adopted with finality. A qualitative approach was employed for this study, whereby literature from secondary sources, published within the last 10 years, was critically analysed. The findings of this study indicate that artificial intelligence has resulted in individualised teaching, an instant feedback mechanism, innovation and administrative efficiency. Also, it highlights some of the key challenges, such as a lack of digital literacy, constrained infrastructure, ethical concerns, a lack of a regulatory framework, unequal and exclusive deployment and unauthorized access to data. To alleviate the challenges that result from artificial intelligence integration in higher education policy formation and practice, this work recommends insisting on the ethical use of technology among students, installation of a robust technological infrastructure, professional development and training, enforcement of regulatory frameworks and engagement of governance boards and adopting internationally accredited data protection standards.

INTRODUCTION

Artificial intelligence (AI) is a technology domain with far-reaching effects and the capability to modify every aspect of social interactions. The educational space has undergone major transformations due to technological advancements and the emergence of artificial intelligence. As a consequence of AI, new teaching and learning methods are emerging, university and college operations are undergoing automation, research methods and information access are evolving, and new policies are being enacted to ensure that ethics are upheld when using AI. Modern life integrates computing technology and AI-based applications, proving the significance of technological advancement. New opportunities and challenges resulting from the use of artificial intelligence can drastically reform the administration and internal architecture of higher education institutions (Singh & Hiran, 2022). They define AI as the ability to involve computerised systems in performing human-like tasks, for instance, learning, adaptation, synthesis, self-appraisal and data usage for intricate computations.

Already, Artificial Intelligence has caused profound alterations in the operations of higher education institutions. The application of AI in education can conspicuously be identified in three areas, which are learning, instruction and administration (Singh & Hiran, 2022). AI has recently risen from the periphery of academic research to the forefront of public policy discourses as a result of its achievements and disruptive potential. Rapid technological advancements are creating multiple risks and challenges that are surpassing regulatory structures and policy discussions (Miao et al., 2021). It was estimated that by 2024, tech companies would have invested approximately US$ 6 billion in the development of intelligent, adaptive and personalised learning systems for deployment to learning institutions around the world (Bhutani & Wadhwani, 2018). The application of AI in education

contexts continues to raise pertinent questions that inform policy formation, for instance, about what should be taught and how the evolving role of educators, the social and ethical implications of AI, alongside issues like equity and access, concerns that a robust education policy would address (Miao et al., 2021). A good policy clearly defines the course of action to be followed, the theories, propositions and the underlying causal models, as well as the outcomes to achieve within a specific timeframe. That is, based on the assumptions of various theoretical propositions, legal action decisions are taken in a policy formulation cycle to achieve the specific policy objectives (Firdaus et al.,2023). The scope of this paper will be to examine the extent to which AI has impacted higher education in shaping policy around accessibility, inclusivity and affordability.

The transformations in higher education as a result of the swift development of Artificial Intelligence (AI) make possible data-driven decision-making and intensify accessibility and institutional efficiency. However, the incorporation of AI into policy formulation is marred by difficulties. Lacking digital literacy, constrained digital infrastructure and ethical concerns, the majority of higher institutions of learning face the difficulty of full utilization of AI to develop inclusive, equitable and sustainable policies. In emerging economies, minorities are underrepresented in making policy decisions because of the digital divide, which worsens inequality. The absence of defined frameworks for the ethical application of AI may also exacerbate algorithmic biases, a lack of privacy and accountability. Algorithmic bias refers to a scenario in which an algorithm benefits a section of the population against the rest based on gender, race, migration status, ethnicity and so on (OECD, 2023). If the above challenges are fixed, AI-driven policies in education will be characterized by aspects of equity, inclusivity and access and sustainability. This paper examined the impact of Artificial Intelligence on higher education policy formation and practice. Specifically, the paper aimed to examine the challenges hindering the integration of AI in higher education policy development and propose potential solutions. The following questions guided the study:

I. How does AI impact higher education policy formation and practice?
II. What are the challenges of integration of AI in higher education policy development and their possible solutions?

METHODOLOGY

This is a qualitative research-type article that engages a literature review related to the problem in question. The steps involved in this study were to retrieve relevant data from journal articles and books that correlate with the research question. The aim was to interrogate the issues of AI integration in the process of higher education policy formation to uphold the scientific spirit and technology-driven management. The author combined data from diverse sources for objective analysis, which was categorised into themes. Outcomes from this research emphasise meaning rather than generalization. An in-depth examination of the acquired literature was then analyzed to generate findings and draw conclusions. The researcher gave priority to reviewing scientific works published within the last 10 years. This was to ensure that the findings are as current as possible since the topic under investigation keeps evolving rapidly.

RESULTS

Impact of Artificial Intelligence on Higher Education Policy and Practice.

Education policy can be described as public policy in the field of education. The aim of education policy should be to achieve the national development goals in a given country's education sector, since the goal of national development is the need to sustain an educated population. Education policy is the basic regulator of education systems. Several policies have been instigated to facilitate education providers and promote innovative education that achieves the national goals of education (Viennet & Pont, 2017). Artificial intelligence tools like IBM’s Watson, launched in 2011, and ChatGPT, launched in late 2022, have gained popularity and infiltrated higher education. Due to the documented improvements in learning effectiveness and academic results, they have been widely embraced (Rubin, 2024). Numerous benefits can be derived from the use of AI tools in higher education practices and policy. For higher education researchers, AI has enabled non-native English

speakers in scientific writing, which is a positive. Also, new scholarships have been made more accessible, and ChatGPT can distribute research and improve indexing. According to Zouhaier (2023), research has established not only the effectiveness but also the efficiency of AI in equipping students with novel skills required for their future careers. While investigating the impact of AI on higher education, his study revealed that AI has impacted the learning experiences of the students by enabling skill and knowledge acquisition through promoting individualised teaching, providing immediate feedback, and assisting in the assessment and evaluation processes. Moreover, the higher education administrators also use AI in automating tasks. Thus, the implications of AI for policymakers, educators and other stakeholders are outstanding (Zouhaier, 2023).

Addressing the challenges of integration of Artificial Intelligence (AI) in Higher Education.

The ability of AI to be used to abet plagiarism or cheating is one of the ethical issues under consideration by institutions. With sophisticated AI tools that can imitate human responses, students take advantage of these tools to bypass authentic learning and academic integrity (Nwozor, 2025). This presents a complex scenario for educators on how to detect and deter such behaviour while preserving the fairness of the evaluation procedure because this challenge goes beyond mere detection; educators must strike a balance between encouraging ethical use and preventing its misuse for academic purposes (Cowls et al., 2019).

Developing digital infrastructure is one of the main ways of tackling the challenges of integrating AI into higher education policy and practice. To build a robust technological foundation for AI-driven policy-making and educational practices, institutions must invest in reliable internet access, cloud-based systems and AI-responsive software. Institutions would fail to realize their full AI potential, decision-making and individualized instruction without infrastructural upgrades. Nevertheless, they can establish a climate where AI technologies achieve operational efficiency by prioritizing digital infrastructure development to improve accessibility, efficiency and data-driven policy-making (Pedro et al., 2019).

For the effective integration of AI in higher education policy and practice, it is vital to bridge the digital literacy gap (Reimer & Hill, 2024). Professional development and training programs should be developed to furnish students, faculty and administrative staff with the requisite AI literacy skills to effectively utilize AI tools for research, instruction and decision-making. The potential benefits of using AI-driven systems become limited if the stakeholders using them struggle to adapt due to inadequate training and professional development. Likewise, accountability and responsibility should be promoted in higher education by incorporating courses on the ethical use of AI technologies into the curriculum, courses that help students and educators understand issues of data security, privacy and algorithmic biases so that AI is applied in compliance with institutional values and societal expectations (Reimer & Hill, 2024). Therefore, the issue of the digital literacy divide can be addressed by institutions leveraging the merits of AI while promoting a more knowledgeable and accountable academic ecosystem (Boch et al., 2022; Mittelsteadt, 2023).

Addressing the challenges of integrating AI into higher education policy and practice demands the formulation of a legislative and regulatory framework. Educational institutions must set uniform standards to guarantee the transparent, efficient, and ethical application of AI in academic and administrative processes (Eze, 2024). Risks like algorithmic biases and misuse of AI tools can be mitigated by rolling out clear policies that specify data privacy measures, accountability frameworks and principles of fairness. So that institutions remain responsive to emerging challenges, regulatory frameworks should be flexible and accommodating to technological changes. Stakeholders: AI specialists, policymakers and educators must collaborate in refining these frameworks to comply with institutional and societal needs. Establishing well-thought-out AI policies promotes confidence, safeguards ethical principles and a structured environment that leverages the benefits of AI while reducing risks (Eze, 2024; Nwozor, 2025).

So that AI deployment is equitable and inclusive, institutions must design their AI policies to improve and guarantee accessibility and equity to education for all, including the underrepresented and marginalized groups. Learners drawn from different socio-economic backgrounds have different

levels of access to AI tools and resources. AI systems run the risk of entrenching disparities by generating skewed data, which can misinform decision-making if not well deciphered, thus hindering inclusivity. To address the issue of perpetual disparities, institutions should conduct regular audits of their AI systems that are likely to lead to unintended prejudices. The establishment of an equal learning environment for all backgrounds of students to benefit from AI-powered innovations, coupled with transparency, can also promote equity and inclusivity (Nwozor, 2025).

Continued unauthorised access to data from the digital space has lately been on the rise, causing privacy and ethical concerns. Vast amounts of data processibility using AI together with individualized learning increases the chances of privacy violations, misuse and erosion of routine pedagogic values (Nwozor, 2025). To ensure the security of student and institutional data, institutions should adopt globally accredited data protection standards. Moreover, AI governance boards should be established to oversee ethical AI use, mitigate biases and enforce accountability.

DISCUSSION

The findings drawn from the reviewed literature suggest that for the problem of using artificial intelligence to bypass authentic learning and academic integrity to be dealt with, educators must strike a balance between encouraging the ethical use of technological innovations and preventing their misuse in academics. Secondly, a robust technological infrastructure for AI-driven policy-making requires the installation of reliable internet, cloud-based systems and responsive software installation. Thirdly, the digital literacy divide can be closed by conducting professional development and training programs for faculty, students and administrative staff so that teaching, research and administration are made more efficient. Fourthly, enforcement of legislative and regulatory frameworks addresses algorithmic biases and data privacy in higher learning (Eze, 2024). Furthermore, achieving parity demands institutional regulations that promote equity, inclusivity and accessibility. Finally, the challenge of AI integration can be addressed by establishing AI governance boards and adopting internationally recognised data protection standards.

CONCLUSION

Higher education is transforming rapidly due to Artificial Intelligence, which is impacting practice and policy in various dimensions. Due to its incorporation into academic environments, there is a remarkable recognition of individualized instruction, immediate feedback mechanisms for evaluation, administrative efficiency, effectiveness and improved research capabilities and innovations. Conversely, integration of AI is plagued by myriad challenges ranging from illiteracy, constraints in infrastructure, ethical concerns, absent regulatory frameworks, to sharp digital divides (which have now prominently emerged as a complex facet of the drawbacks).To bridge the digital use divide gap, there is a need to develop technology plans, conduct curriculum reviews, organise professional development workshops and seek to protect data privacy. However, the digital design divide can be bridged in two ways: by providing administrators and educators with appropriate digital literacy training, and by embracing diversity during stakeholder involvement in decision-making and policy implementation. To mend the digital access divide, conducting regular policy assessments, promoting inclusion, and demonstrating digital citizenship are recommended (Reimer & Hill, 2024).

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XÜLASƏ
ALI TƏHSİLDƏ SİYASƏTİN FORMALAŞMASI VƏ TƏCRÜBƏSİNDƏ SÜNİ İNTELLEKTİN İNTEQRASİYASININ ÇƏTİNLİKLƏRİ

Anyinyo Norman

Süni intellekt ali təhsilin sürətli transformasiyasında mühüm rol oynayır. Universitetlər öyrənmə, tədris və ümumi idarəetmə proseslərində texnologiyalardan geniş şəkildə yararlanmaqla yanaşı, süni intellektin ali təhsildə siyasətin formalaşması və təcrübəsinə təsiri hələ də tam şəkildə qiymətləndirilməmiş qalır. Süni intellektin siyasət qəbulu və tətbiqinə təsirini konkret nümunələrlə əks etdirən ədəbiyyat hələ vahid və sistemləşdirilmiş formada deyil; bu vəziyyət isə müxtəlif süni intellekt alətlərinin sürətlə inkişaf etməsi ilə əlaqələndirilə bilər. İndiyə qədər aparılan tədqiqatların əsas diqqəti süni intellekt alətlərinin tələbələrin və professor-müəllim heyətinin akademik dürüstlüyünə təsirinə yönəlmiş, lakin bu sahədə təklif olunan həllər hələ də tam və qəti formada qəbul edilməmişdir. Bu tədqiqatın nəticələri göstərir ki, süni intellekt təhsildə fərdi öyrənmə, dərhal rəy mexanizmi, innovasiyalar və idarəetmə səmərəliliyinin artmasına səbəb olmuşdur. Eyni zamanda aşağıdakı əsas çətinlikləri də vurğulayır: rəqəmsal savadlılığın aşağı olması, məhdud infrastruktur, etik problemlər, tənzimləyici çərçivənin olmaması, Sİ-nin qeyri-bərabər və istisnaedici tətbiqi, habelə məlumatlara icazəsiz giriş. Araşdırmanın nəticələri göstərir ki, süni intellektin ali təhsildə siyasətin formalaşması və tətbiqinə inteqrasiyası bir sıra ciddi çətinliklər yaradır. Bunlar arasında rəqəmsal savadlılıq səviyyəsinin aşağı olması, məhdud texnoloji infrastruktur, etik narahatlıqlar, tənzimləyici

çərçivənin olmaması, texnologiyanın qeyri-bərabər və istisnaedici tətbiqi, habelə məlumatlara qeyri-qanuni giriş kimi problemlər ön plandadır. Bu çətinliklərin aradan qaldırılması məqsədilə tədqiqat bir sıra tövsiyələr irəli sürür. Tələbələr arasında texnologiyanın etik istifadəsinə dair ciddi tələblərin qoyulması, möhkəm və etibarlı texnoloji infrastrukturun yaradılması, müəllim və idarəetmə heyəti üçün davamlı peşəkar inkişaf və təlim proqramlarının təşkili, müvafiq tənzimləyici çərçivələrin işlənib hazırlanması və icrasının təmin edilməsi, idarəetmə orqanlarının aktiv cəlb olunması, eləcə də beynəlxalq səviyyədə akkreditə edilmiş məlumatların qorunması standartlarının qəbul edilməsi bu sahədə əsas addımlar kimi qəbul olunur.

Keywords: *Süni İntellekt, Siyasətin Formalaşması, Ali Təhsil, Adaptiv Öyrənmə, Çərçivə*

АННОТАЦИЯ

ПРОБЛЕМА ИНТЕГРАЦИИ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ФОРМИРОВАНИЕ И ПРАКТИКУ ПОЛИТИКИ ВЫСШЕГО ОБРАЗОВАНИЯ.

Аниньо Норман

Искусственный интеллект (ИИ) способствует быстрой трансформации высшего образования. В то время как университеты используют технологии в обучении, преподавании и общем управлении, влияние ИИ на формирование политики и практику в высшем образовании остается недостаточно признанным. Конкретная литература, иллюстрирующая влияние искусственного интеллекта на формулирование политики и практику, все еще не консолидирована, возможно, из-за наблюдаемых ускоренных инноваций различных инструментов. Значительное внимание было уделено влиянию инструментов ИИ на академическую честность студентов и преподавательского состава, однако предложенные до сих пор решения не могут быть приняты окончательно. Для этого исследования был использован качественный подход, при котором литература из вторичных источников, опубликованная менее 10 лет назад, была критически проанализирована. Результаты этого исследования указывают на то, что искусственный интеллект привёл к индивидуализированному обучению, механизму мгновенной обратной связи, инновациям и повышению административной эффективности. Кроме того, они подчёркивают ряд ключевых вызовов, таких как отсутствие цифровой грамотности, ограниченная инфраструктура, этические проблемы, отсутствие регуляторной базы, неравномерное и эксклюзивное внедрение, а также несанкционированный доступ к данным.Чтобы облегчить проблемы, возникающие в результате интеграции искусственного интеллекта в формирование политики и практику высшего образования, эта работа рекомендует настаивать на этическом использовании технологий среди студентов, установке надежной технологической инфраструктуры, профессиональном развитии и обучении, обеспечении соблюдения нормативной базы, вовлечении советов управления и принятии международно аккредитованных стандартов защиты данных.

Ключевые слова: искусственный интеллект, формирование политики, высшее образование, адаптивное обучение,рамки.