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Artificial Intelligence and Student-Centric Higher Education under Bharat''s National Education Policy 2020: A Systematic Literature Review

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***Abstract*— India has a vision of the National Education Policy 2020, which sees a fundamental change in the sphere of higher education to provide learner-focused, multidisciplinary, and technology-oriented education ecosystems. The introduction of Artificial Intelligence has become one of the major factors that contribute to the fulfilment of this vision, especially in improving the learning process by students, building skills, and academic participation. Although the concept of policy discourse firmly suggests the adoption of Artificial Intelligence in the course of higher education, the current academic evidence on the topic of integration, as viewed through the prism of the student, remains divided. The paper is a Systematic Literature Review, whereby the authors utilize scholarly literature to provide a synthesis of Artificial Intelligence in higher education in the context of NEP 2020 concerning student learning, future readiness, and human potential. The systematic and clear methodology of the review is based on its use of peer-reviewed journal articles, conference papers, and scholarly publications published since NEP 2020 was announced. Major academic databases were also used to identify relevant studies applying predetermined exclusion and inclusion criteria. To define the predominant trends, opportunities, and challenges in adopting Artificial Intelligence in higher education, the chosen number of literatures was analyzed on a thematic level. As the findings show, the NEP 2020 learner-centric approach is greatly supported by Artificial Intelligence through personalized learning process, adaptive assessment systems, and increased student engagement. Another issue prominently observed in the literature concerning the use of Artificial Intelligence is that it fosters multidisciplinary skills and enhances employability of students in technology enabled economy. Nonetheless, there are also issues associated with digital access, ethical AI exploitation, information privacy, and disproportionate student readiness specifically amongst learners in a rural and semi-urban setting. The review states that there are severe research gaps, such as the scarcity of the empirical studies that are informative, devoted to the experiences of the students and the outcomes that are human-centered. Having generalized previous information, the study will add academic discourse about Artificial Intelligence and NEP 2020 and offer an academic foundation to students anticipating conducting future studies that can implement holistic and inclusive higher education.**

***Index Terms*— Artificial Intelligence in Education; National Education Policy 2020; Higher Education in India; Student-Centred Learning; Digital Pedagogy; Ethical AI**

I. INTRODUCTION

The artificial intelligence (AI) concept is more often integrated into the academic institution in the form of adaptive learning systems, automated feedback, and learning analytics, and, more recently, a large language model to perform academic support tasks. According to a significant amount of literature in peer-reviewed journals, AI in education is ceasing to be the absolute peripheral innovation but is in fact an ever-growing interdisciplinary domain that has implications to student learning practices and processes, assessment practices, and to academic experience (Wang et al., 2024; Zawacki-Richter et al., 2019). Specifically, to the field of higher education, systematically evidence indicates that technology-mediate learning environments can influence student engagement in their behavioural, cognitive, and affective aspects, which makes digital and AI-mediated pedagogies to have a direct influence on the outcomes of student success (Bond et al., 2020). The global change in India

is overlaid with the implementation agenda that comes with the National Education Policy 2020 (NEP 2020). Although NEP 2020 is a document of policy, the academic discourse surrounding it has become a burgeoning literature in the journal that reviews its assumptions, particularly, its focus upon technology-mediated teaching-learning and the redesign of learning environments. According to Kumar et al. (2021), NEP 2020 can be described as a broad reform agenda that is focused on changing education systems and aligning them with the long-term development goals. Significantly to a student-centred investigation, Kundu and Bej (2021) examine NEP 2020 through the prism of pedagogies, institutions, and human aspects, emphasizing that the implementation of technology is not an issue of infrastructural nature and is, instead, a process of change, which affects the system of student support, teacher competence, and equity. These peer-reviewed reviews are important, since they move NEP 2020 out of a solely inspirational space, and into an implementational problem space, where the student experience is a key measure of policy success.

As a student, the concept of the AI being potentially valuable under an NEP-focused landscape of higher education is usually described through the prism of three areas of outcomes. First, the AI-based personalization can accommodate the needs of various learners by accelerating content through adjusting the pace of learning, recommending resources, and enhancing a feedback process which are the mechanisms that have been repeatedly defined as the most common clusters of application in the wider AI-in-education literature (Wang et al., 2024; Zawacki-Richter et al., 2019). Second, AI tools can enhance academic engagement and persistence through scaffolding, enhancing the level of interactivity, and lowering barriers to timely academic support an effect pathway that aligns with evidence mapping regarding educational technology and student engagement in post-secondary education (Bond et al., 2020). Third, AI has the potential to shape employability-related learning through data-driven thinking, automation consciousness, and AI skills, as the standard definition of graduate attributes and change the way students understand future readiness in professional settings (Xiao et al., 2024). The student-centred risks and constraints gain more and more popularity in journal literature. As an example, the large language models and generative artificial intelligence tools have their learning assistance opportunities, yet there is also a threat of intellectual quality, excessive reliance, degradation of skills, privacy, and unequal access that directly influence the academic behaviour of students and their views on fairness (Kasneci et al., 2023). Also, according to the research on AI literacy, the possibility of students using AI in a critical and ethical manner is not necessarily an advantage, and AI literacy can be a quantifiable indicator based on their level of education and academic health in the conditions of online learning (Xiao et al., 2024). The relevance of these results in India is due to the NEP-based technology adoption that occurs under heterogeneous digital preparedness and social-economic differences that may increase the difference between the policy aspiration and student realities (Kundu and Bej, 2021). Although the alarming rate of publication increased, the literature on the relationship between AI and higher education to NEP 2020 has little focus on the latter, but remains spread across the fields and journals. The literature on AI-in-education encompasses massive literature reviews and systematic syntheses which survey the literature field holistically (Wang et al., 2024; Zawacki-Richter et al., 2019), but are not centred on NEP 2020 as a contextual benchmark. On the other hand, the journal conversations about NEP frequently rely on design implementation and system preparedness (Kundu and Bej, 2021; Kumar et al., 2021) but do not collectively integrate the evidence regarding the effects of AI on student learning, engagement, and literacy achievements. This fragmentation drives the need to have a systematic literature review (SLR) that synthesizes peer-reviewed journal evidence at the nexus between AI, NEP 2020 aligned transformation of higher education, and student-centred outcomes.

The research in question is a systematic literature review of journal articles to summarize what is already known about AI in higher education in the context of NEP 2020, with a specific focus on the student point of view. The review seeks to determine (a) the ways AI-inspired pedagogies and systems are being imagined in NEP-related higher education studies (b) the evidence presented in the literature as to the outcomes of student learning, student engagement, and student preparation in AI-mediated learning contexts, and (c) what weak areas in the literature remain to

address issues of equity, ethics, and student readiness in AI-mediated learning settings.

II. METHODOLOGY

The paper presents a Systematic Literature Review (SLR) approach to review academic literature on the application of Artificial Intelligence (AI) in higher education through the lens of the National Education Policy 2020 in India and student-centred learning and human potential specifically. The reason why an SLR was suitable is that it allows developing a structured, transparent, and reproducible synthesizing of existing studies to minimize subjectivity, which is often linked to narrative reviews (Kitchenham and Charters, 2007; Snyder, 2019). An established set of SLR practices informed the review methodology and relied on the Preferred Reporting Items of Systematic Reviews and Meta-analytical frameworks (PRISMA) to guarantee the clarity and rigor of the methods applied in the review (Page et al., 2021).

Research Objectives

The review was conducted with the following objectives:

1. To systematically identify peer-reviewed journal literature addressing the application of Artificial Intelligence in higher education in contexts aligned with the vision of the National Education Policy 2020.
2. To synthesize existing research findings related to the influence of Artificial Intelligence on student learning experiences, engagement, skill development, and human potential.
3. To identify key challenges, ethical considerations, and research gaps concerning students' interaction with AI-enabled educational environments.

Research Questions

In line with these objectives, the study seeks to answer the following research questions:

- RQ1: How is Artificial Intelligence conceptualized and applied in higher education research relevant to the objectives of NEP 2020?
- RQ2: What does existing literature report regarding the impact of Artificial Intelligence on student learning outcomes, engagement, and skill development in higher education?
- RQ3: What student-related challenges, ethical concerns, and equity issues are highlighted in studies on AI-enabled higher education?

These research questions guided the design of the search strategy, study selection, and thematic analysis.

PRISMA-Based Study Selection

The selection of the study was carried out in compliance with the Preferred Reporting Items to Systematic Reviews and Meta-Analyses (PRISMA) 2020 in order to provide the transparency and methodological integrity (Page et al., 2021). Primary database search in Scopus, Web of Science, ERIC and Google Scholar found 462 records concerning the themes of Artificial Intelligence, higher education, and NEP 2020 satisfaction. Once the duplicates are sorted out, 78 records were removed and 384 articles were left to be screened. Title and abstract screening The title and abstract screening led to the exclusion of 289 records whose focus was of no use in the research or only covered technical system development or did not have a student-centred or pedagogical focus. The rest 95 full-text articles were evaluated on eligibility criteria. Out of them 61 were filtered out because of limited relevance to the outcomes of students, the lack of empirical or conceptual rigor, or irrelevance to AI applications in higher education. As a result, 34 peer-reviewed journal articles were embraced to fit all inclusion criteria and included in the final thematic synthesis. Much of the methodology that happens during the study identification, screening, eligibility evaluation and selection is depicted in PRISMA flow diagram.

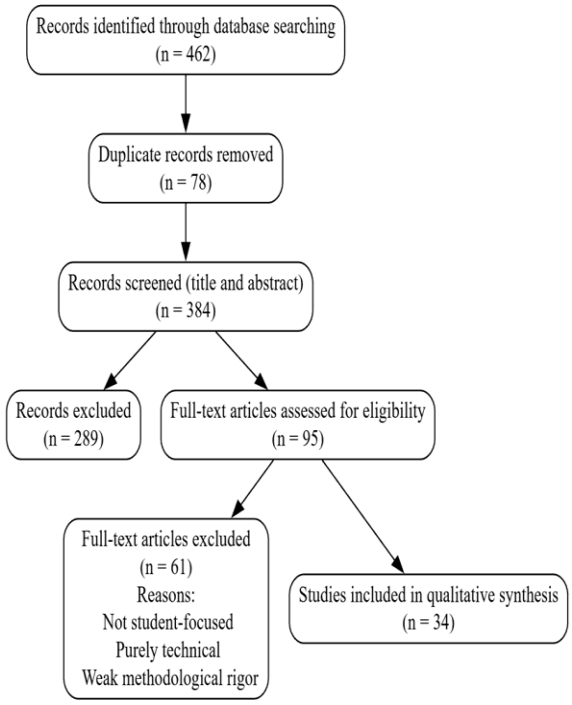

Figure 1: PRISMA Framework

Data Extraction and Thematic Synthesis

After final selection of studies, the data of interest were systematically extracted out of every article included to facilitate thematic synthesis. The information that was extracted contained author information, publication year, context of the study, Artificial Intelligence application type, emphasis on higher education, and important results concerning student learning and engagement, development of skills, and human potential. In a geographical measure to be consistent, only the content that was directly pertinent to the research questions was extracted. Thematic synthesis was applied in the research, which is an appropriate technique to synthesize results in various qualitative and conceptual researches (Braun and Clarke, 2006; Snyder, 2019). The obtained results were first coded to detect common themes and motifs. These codes were then categorized into larger themes that represented areas of discussion that dominated in the literature. The resulting themes constitute a foundation of the Results and Thematic Analysis section and allow structuring the interpretation of the position of Artificial Intelligence in higher education against the goals of NEP 2020 through the student perspective.

Ethical Considerations

The research is founded purely on the secondary data obtained by the previously published journal articles and also there are no human subjects and primary data gathering. Subsequently, this did not necessitate formal ethical approval. However, the conduct of the ethical research was observed through honest description of the findings of the original authors to avoid misrepresentations, proper citation, and crediting of all sources.

III. RESULTS AND THEMATIC ANALYSIS

Thematic analysis of the 34 peer-reviewed journal articles used in this systematic review allowed discovering four broad themes that cumulatively present the manner in which Artificial Intelligence (AI) is currently altering the higher education in a manner that affirms the objectives of the National Education Policy 2020, especially in the student perspective. These themes depict consistent themes and patterns observed in empirical, conceptual, and review-based researches and themes able to cover learning processes, skill building, equity, and ethical issues that have impact on the students. All of these themes are described below with reference to illustrative studies.

Artificial Intelligence and Personalized Student Learning

The theme most actively addressed in the examined literature is connected with the application of AI to facilitate individualized and adaptive education in higher education. Several studies describe the use of AI-based systems like intelligent tutoring systems, learning analytics dashboards, and adaptive content platforms in the support of individualised learning trajectories by modifying the instructional material following student performance and learning behaviours (Kumar et al., 2022; Ouyang and Jiao, 2021). In student terms, personalization is linked to a higher level of engagement, appropriate feedback, and enhanced autonomy in the process of learning. It has been empirically argued that AI-enabled personalization can be most effective with students when pedagogically integrated and not applied as separate technologies (Zhai et al., 2021). Nevertheless, various studies warn that personalization can remain

unequally delivered because of disparities in computing literacy and institutional assistance of students.

Table 1: AI-Enabled Personalized Learning: Key Findings from the Literature

Study	AI Application	Student-Centred Outcome
Kumar et al. (2022)	Learning analytics	Improved feedback and engagement
Ouyang & Jiao (2021)	Intelligent tutoring systems	Self-paced learning
Zhai et al. (2021)	Adaptive learning platforms	Enhanced comprehension

Skill Development and Student Employability

The second theme is AI integration and its impact on students in terms of skill development, more specifically, employability. The analysed literature includes the information that exposure to AI-based learning environments may generate transferable skills of critical thinking, data literacy, and problem-solving (Holmes and Tuomi, 2022; Malik et al., 2023). These are skills that are coming to be considered as key graduate qualities in the digital mediated labour markets. The student viewpoint presents AI literacy as a mediator of technology use and the final outcomes of employability. Research indicates that learners who can comprehend how AI tools operate, their constraints and ethical considerations are in a better position to keep up with the changing work demands (Malik et al., 2023). This corresponds to the general debates on how higher education should go beyond the use of tools and reach conceptual and ethical interpretations of AI.

Table 2: AI and Student Skill Development

Focus Area	Reported Skill Outcomes	Representative Studies
AI literacy	Conceptual understanding of AI	Holmes & Tuomi (2022)
Cognitive skills	Problem-solving, reasoning	Malik et al. (2023)
Employability	Career readiness	Lim et al. (2024)

Equity, Access, and the Digital Divide

Access and equity are a theme that is present throughout the literature. Although AI is frequently shown as an opportunity to provide more people with access to education, a number of studies caution that unfair access to infrastructure, connectivity, and digital abilities might contribute to the previously established disparities among students (Castañeda and Williamson, 2021; Selwyn, 2023). Such challenges are especially relevant to students with rural and socio-economically disadvantaged backgrounds. The analyzed literature highlights the idea that equity in AI-based education goes beyond access to devices and access to the internet. It further incorporates institutional capability to address students, inclusion engineering of AI systems, and culturally answerable pedagogies (Selwyn, 2023). Unless such considerations are provided, the adoption of AI has a significant risk of strengthening structural inequalities instead of resolving them.

Table 3: Equity and Access Challenges Identified in the Literature

Dimension	Student-Level Implication
Digital infrastructure	Unequal access to AI tools
Digital literacy	Varied ability to benefit from AI
Institutional support	Differential learning outcomes

Ethical and Psychological Implications for Students

The last theme follows the ethical and psychological consequences of the use of AI in higher education. There is a constant increase in research on privacy issues in data, the amount of bias in the algorithms, and the absence of transparency in AI-mediated education (Prinsloo and Slade, 2022; Williamson et al., 2023). Regarding the student point of view, these concerns affect the trust, perceived fairness, and readiness to use AI tools. Moreover, other studies mention that there may be certain psychological implications, such as excess dependence on AI-generated assistance and a diminished ability to engage in independent critical thinking in case of the unreflexively use of AI tools (Bearman et al., 2022). These results highlight the need to implement AI in an ethically sound way that facilitates as opposed to eliminates human agency in learning.

Table 4: Ethical and Psychological Issues Affecting Students

Issue	Student Concern
Data privacy	Loss of control over personal data
Algorithmic bias	Perceived unfairness
Over-reliance	Reduced critical engagement

Integrative Thematic Framework

Combined, the four themes demonstrate that the role of AI in higher education is very dynamic and strongly connected to student learning processes, development of skills, equality, and ethical issues. Instead of playing the role of a strictly technological intervention, AI influences educational outcomes in the interplay with the pedagogical design, the institutional environment, and student preparedness. Figure 2 breaks down these interconnections as themed in Figure 2.

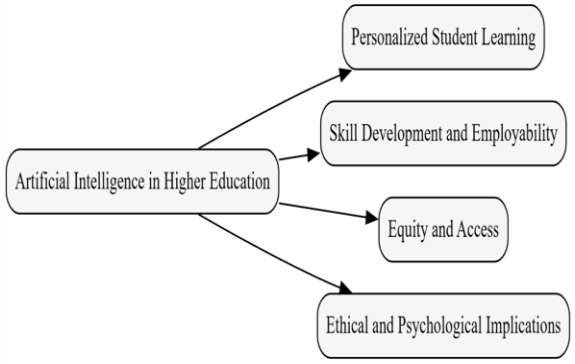

Figure 2. Thematic Framework of AI in Higher Education from a Student Perspective

IV. DISCUSSION

The given systematic literature review aimed to analyze the role of Artificial Intelligence (AI) in the field of higher education to identify the opportunities offered by the latter regarding the purposes of the National Education Policy 2020 in India and specifically to the field of student learning and human potential. The results show that the AI is largely introduced in the literature as a facilitating process of learner-led education, proficiencies building, and institutional re-creation. Nevertheless, to what degree these advantages will be achieved is heavily dependent on the pedagogical synthesis, the student readiness and ethical administration. The prevalence of personalized learning as a central theme supports the change in NEP 2020 where students receive instruction through standardized approaches with an instructor on one side and students on the other part. The evidence of previous studies shows that adaptive systems and learning analytics based on AI can be used in support of student participation and academic performance under the condition of a reasonable pedagogic design (Zawacki-Richter et al., 2019; Holmes et al., 2019). This correspondence is vital as a student point of view. According to the literature, AI tools prove the best when applied to support learning experiences instead of being automated replacements of the instructional engagement. This observation is closely related to the idea of NEP 2020, which is to focus on the comprehensive development and experiences of meaningful learning.

Another main point of collaboration between AI use and policy intent is the development of skills and employability. The literature analysed reveals that the AI-related skills, especially the digital literacy, data awareness, and critical thinking are becoming part of the higher education curriculum (OECD, 2021). Such competencies are not only technical skills but they comprise a larger cognitive and adaptive skills set that applies to fast-changing labour markets. On the part of students, access to AI active learning systems may help in preparing them to be employable, although again this is conditional on the institutions explicitly reinforced with AI literate skills, and not on passive learning skills acquisition. Simultaneously, the results point to the ongoing issues related to equity that make the idealizing account of AI use in higher education hard to simplify. Along with more general promises of educational technology, the literature highlights that lack of equal access to infrastructural, digital, and institutional resources can reflect or further increase underlying educational inequalities (Selwyn, 2016; Williamson and Hogan, 2020). This mismatch between policy vision and implementation capacity is especially critical in the Indian context against a background in which NEP 2020 has endorsed the aspect of inclusion and access. In the case of rural and semi-urban students, AI-induced reforms might not provide much value without accompanying changes in the system in terms of the provision of digital preparedness and support systems.

Ethical issues too take up an expanding dimension in the literature, especially concerning data privacy, algorithm-transparency, and student agency. The study of learning analytics and AI-augmented educational systems warns that the potential harm to student trust and autonomy may be caused by the practices of opaque data gathering and surveillance-based models (Prinsloo and Slade, 2017; Regan and Jesse, 2019). As a student-centred perspective, AI use as an ethical one should therefore consider transparency and consent as well as maintaining human authority in the choice in education. This is much in line with the general humanistic orientation of NEP 2020 which anticipates human values, morals, and social accountability in addition to the technological progress. The discussion indicates that although AI has a significant potential to facilitate the NEP 2020 needs, future-oriented, and learner-centric objectives, its application has been somewhat contingent on the contextual, pedagogical, and ethical factors rather than on the technical ones. Student positioning shows that it is not AI as a phenomenon, which is neutral, but rather a mediated system with institutional practices, access to certain elements, and value frameworks. The dimensions are crucial to consider when it comes to making AI a part of the human potential achievement in higher education.

V. CONCLUSION

This is a systematic literature review that investigated peer-reviewed studies about the use of Artificial Intelligence in higher education concerning the goals of the National Education Policy 2020 in India with an emphasis on student learning and human potential. This result suggests that AI is mainly aligned with a stimulator of learner-centered education via personalized learning spaces, skill education, and improved academic activity. Meanwhile, the review draws attention to lasting issues concerning fair access, digital preparedness, and ethical management that condition the experiences that students can have with the AI-supported education. Although the review offers a synthesized view of the available literature, it is vulnerable to critical limitations such as its reliance on secondary data, coverage in journals published in the English language, and the dynamic nature of AI technologies that can make some of the finding's time-sensitive. Future studies, then, ought to be motivated by empirical, student-centred researches in the Indian higher education scenario, specifically longitudinal studies carried out on learning outcomes, AI literacy, and ethics consciousness in a range of socio-economic contexts. This research would enhance the use of AI in accordance with NEP 2020 based on evidence and help toward a more inclusive and human-focused change in education.

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