

ARTIFICIAL INTELLIGENCE AND INDIAN HIGHER EDUCATION

Saroj

Research Scholar
Department of Education,
C.C.S. University, Meerut-250004

Vijay Jaiswal

Professor & Dean
Faculty of Education,
C.C.S. University, Meerut-250004

ABSTRACT

Artificial Intelligence (AI) and Data Analytics play a major role in online and hybrid learning platforms. Globally HEIs are introducing programmes where AI provides the platform to launch personalised learning. Technology provides a variety of materials in various formats to suit different students and monitor and assess their progress. The National Education Policy 2020 recommends a redesign of higher education in the country to make it more student-centered and multi-disciplinary. It aims to pave the way for transformational reforms in the country's school and higher education systems. The policy seeks a complete overview and re-energizing of the higher education system to overcome challenges and deliver good quality higher education.

Key Word : Artificial Intelligence; Indian Higher Education.

Introduction

The shortage of skilled man-power is a cause for concern in most sectors in India. Experts acknowledge that the present higher education system in India is not equipped to address this problem without some changes in the basic structure. Swift and significant changes in the talent market have marked global trends in the last two decades or so. Accordingly, Higher Education Institutions (HEIs) are expected to cope with the demands of various sectors. The predominant discourse on the demands of the talent market and the employability of graduates in India tends to revolve around one question: how do we recalibrate or improve the education system in our colleges and universities?

HEIs are required to constantly upgrade themselves to meet the demands of both students and industries against the backdrop of rapid technological development. The next generation of learners traverse physical and virtual spaces, so learning has to be active, agile, adaptive, innovative, cooperative and collaborative. At the same time, students need to be trained in social and communicative skills and entrepreneurship. Their creativity should be triggered to innovate while keeping environmental and social concerns in mind. Above all, they need to be mentored to become socially productive citizens with honesty, integrity and humanity. This is possible if they are empowered to learn according to their abilities, interests, and specific needs through personalised learning (Rahman, 2022).

Personalised/Individualised Learning

The term 'personalised learning' has been in vogue for a long time. Earlier, it referred to a one-to-one tutoring system, mostly for the privileged. Today, it refers to learning that prioritises an individual student's requirements and uses flexible instructional practices in terms of content, pace and materials. Learning need not be linear as sometimes, learners may have to take a step back

if not equipped with the necessary schemata to understand the content. The entire learning process becomes student-centric and the students are encouraged to design their own learning pathways.

Virtual Reality (VR), Augmented Reality (AR) and Artificial Intelligence (AI)

Virtual Reality (VR), Augmented Reality (AR) and Artificial Intelligence (AI) are on the doorstep of education, and without a doubt, they will change how we teach and learn. The classroom of the future will be a hyper-immersive experience that will cater to an experiential learning environment through a purely digital ecosystem, fostering teaching and learning that closely mimics in-person interaction.

Virtual Reality (VR) applications are expected to grow quickly in education. VR allows us to bridge the gap between educators and learners. Distance learning tools can put educators and students together in the same room with digital representations of themselves—teachers can teleport into the VR world and guide students through their experiences.

Moving this type of immersive learning experience further, Augmented Reality (AR) drives student engagement by simulating superimposed, artificial objects in real-world environments and enhancing their perception of reality. Students can explore, experience, or be involved in virtual objects as if they are present in that environment. Look at the popularity of this technology in applications like Pokémon Go or enhanced shopping experiences. Today's students are accustomed to the oscillation between an online and in-person experience. In the future, teaching strategies will take advantage of these experiences to improve student engagement and success rates (Shenoy, 2019).

Artificial Intelligence (AI) and Data Analytics play a major

role in online and hybrid learning platforms. Globally HEIs are introducing programmes where AI provides the platform to launch personalised learning. Technology provides a variety of materials in various formats to suit different students and monitor and assess their progress. However, it does not undermine the teacher's role. There are areas such as communication and collaborative skills, and emotional intelligence, which require human intervention. Therefore, the role of teachers in personalised learning remains as important as it is in traditional learning. AI can never replace educators; it can only enhance and support personalised learning by providing automated tasks, assessment platforms and feedback. Many paths of study emerge and all ultimately merge with the curriculum's common learning outcome. Thus, the pattern of education becomes student-centric. This systemic change gives a new dimension to the teaching-learning process where teaching becomes counselling and the teacher becomes a mentor. The students are motivated to take control of their learning and become autonomous (Rahman, 2022).

Adoption of AI in Higher Education will not only promise a better career for the students, but it will also contribute to the quality of learning. The application of AI in higher education can be summarized into three different points Raja K. (2022):

1. **Institutional Applications** : Marketing, Recruiting, Admission, Curriculum development and Resource planning.
2. **Student Support** : Guidance, Just-in-Time Financial Aid, Early Warning.
3. **Instructional Applications** : Self-paced progress, Personalized Learning.

The ability to fully leverage these technologies will enable Higher Education Institutions (HEIs) to transform learning and the campus at large to meet student needs. From personalized programs and more effective distance learning to stronger research capabilities and a more connected student life, the innovations of VR, AR, and deep learning can improve student success and satisfaction exponentially. Allowing students to more closely experience their academic focus in these ways will only bring more value to higher education (Shenoy, 2019).

NEP 2020 Perspective

In higher education, the policy has raised the gross enrolment ratio to 50% by 2035, introducing 35 million additional seats. The policy emphasizes making higher education multi-disciplinary, holistic undergraduate education with flexible curricula, creative, idea-based-application, and vocational education. The new education policy focuses on developing large multi-disciplinary universities such as Takshashila, Nalanda, Vallabhi, and

Vikramshila in ancient times. It will increase an interdisciplinary research environment to create innovative individuals to transform the nation educationally and economically. It also implements a flexible curriculum through multiple entries and multiple exit system.

The students will be provided with appropriate certification based on completed credits. Higher education will be monitored by a single body, i.e., the Higher Education Commission of India (HECI). The HECI will have National Accreditation Council, Higher Education Grants Council, General Education Council, and the National Higher Education Regulatory Council, responsible for accreditation, funding, standard-setting, and regulation, respectively. There will be no difference in the norms for public and private institutions. The new policy also emphasizes fostering the research across the higher education institutions and suggests to create the National Research Foundation (NRF) as an apex body to achieve the task.

The new policy advocates to phase out the culture of affiliated colleges in the next 15 years. The institutes will get financial autonomy as well. Another exciting part of the new policy is that it allows Indian universities to open their overseas campuses and encourage top universities worldwide to open their campuses in India. The objective is to promote India as a global study destination by providing premium education at affordable costs. Furthermore, research collaboration and student exchanges between Indian institutions and global universities will be endorsed through exceptional efforts. Credits acquired in foreign universities will be permitted, where appropriate as per home institutions' requirements, to be counted for the degree's award. Research scholars will get add-on assistantships, and scholarships number would be a hike in higher education.

The policy will ensure to provide co-curricular activity opportunities to students of HEIs. Students would be encouraged to participate in sports, community involvement, and cultural activity clubs. They will get yoga, gyming, stress management counseling, and medical facilities inside the campus. The institutions will cater to mentorship, socio-emotional, and academic support to URG (under-represented groups, i.e., SC, ST, Minorities, special needy) students, as well as free ship in spare cases. The administration is bound for strict enforcement of no-discrimination and anti-harassment rules. Gender-neutrality, equity, and inclusion will be the critical elements in the campus environment (Priyadarsi, 2020).

NEP 2020's vision and commitment towards research and development of science and technology is reflected in terms of the provisions of the National Research

Foundation (NRF) and the National Educational Technology Forum (NETF). The NRF and NETF will not only play important role in facilitating to carry out problem-solving research and developing digital resources of study materials but also look into innovative ways in which technology can be leveraged for the benefit of students and researchers.

The National Education Policy 2020 recommends a redesign of higher education in the country to make it more student-centered and multi-disciplinary. It aims to pave the way for transformational reforms in the country's school and higher education systems. The policy seeks a complete overview and re-energizing of the higher education system to overcome challenges and deliver good quality higher education.

Some of the salient features of National Education Policy 2020 for higher education revamp includes :

- NEP 2020 aims to increase Gross Enrolment Ratio (GER) in higher education to 50 % by 2035 by adding 3.5 crore seats in higher education.
- Setting up of Multidisciplinary Education and Research Universities (MERUs), at par with IITs, IIMs, as models of best multidisciplinary education of global standards in the country.
- The National Research Foundation will be created as an apex body for fostering a strong research culture and building research capacity across higher education.
- Higher Education Council of India (HECI) will be set up as a single overarching umbrella body for entire higher education, excluding medical and legal education. Other regulatory bodies are General Education Council (GEC) for outcomes on the education, Higher Education Grants Council (HEGC) to provide financial support, National Accreditation Council (NAC) for supervising and coordinating the accreditation bodies & National Higher Education Regulatory Council (NHERC) for bringing equity and transparency in HEIs.
- UG education can be of 3 or 4 years with multiple exit options and appropriate certification within this period.
- Academic Bank of Credits to be established to facilitate Transfer of Credits.
- Public and private higher education institutions will be governed by the same set of norms for regulation, accreditation and academic standards.
- Holistic Multidisciplinary Education with multiple entry/exit options.

- Equitable and inclusive education – Special emphasis given on Socially and Economically Disadvantaged Groups (SEDGs).
- Exposure of vocational education in school and higher education system

Conclusion

Like any technology, AI also has some pros and cons in regard to its applications. AI driven education system may have some negative impacts like deterioration of values, threat to human civilization, potential health risk of learners and staff, reduction in employment opportunities for traditional teachers, complete dependency on technology, learning gap, issues of data management and cyber securities and so on. The National Education Policy (NEP) 2020 aimed to bring about some significant changes in the Indian educational system. It discusses an educational system that emphasizes experiential learning as well as 21st-century abilities such as critical thinking, problem-solving, and so on.

The success of NEP 2020 rests on revamping the regulation and governance of education at all levels and across all sectors. It presents elaborate regulatory frameworks for school, higher education, Open Distance Learning (ODL), teacher education and enabling foreign universities to set up campuses in India. A “light but tight” regulatory framework is one of the fundamental principles guiding the policy to “ensure integrity, transparency and efficiency of the educational system”. It calls for immediate changes in governance and regulations.

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