



PROSPECTS OF ARTIFICIAL INTELLIGENCE (AI) AND PERSONALIZED LEARNING IN INCLUSIVE EDUCATION INTEGRATED TO THE NATIONAL EDUCATION POLICY (NEP) - 2020

VOLUME - I

Chief Editors

Dr.T.Mohana Sundari | Dr.P.Archanaa

Editors

Dr.B.Indira Priyadharshini | Dr.T.Vijaya Chithra
Dr.P.Gomathi Devi | Dr.M.Deepa
Dr.M.Shanmuga Priya | Dr.R.Ramya



**PROSPECTS OF ARTIFICIAL INTELLIGENCE (AI) AND PERSONALIZED
LEARNING IN INCLUSIVE EDUCATION INTEGRATED TO THE
NATIONAL EDUCATION POLICY (NEP) - 2020**

Chief Editors

Dr.T.Mohana Sundari

Assistant Professor, Department of Commerce (CA)

Dr.P.Archanaa

Assistant Professor & Head, Department of Commerce (CA)

Editors

Dr.B.Indira Priyadharshini | Dr.T.Vijaya Chithra

Dr.P.Gomathi Devi | Dr.M.Deepa

Dr.M.Shanmuga Priya | Dr.R.Ramya

Assistant Professor, Department of Commerce (CA)

Sponsored by

INDIAN COUNCIL OF SOCIAL SCIENCE RESEARCH (ICSSR-SRC)
Hyderabad.

Organized by

DEPARTMENT OF COMMERCE (CA)

NALLAMUTHU GOUNDER MAHALINGAM COLLEGE

An Autonomous Institution Affiliated to Bharathiar University

Re-Accredited with A++ by NAAC & ISO 9001:2015

Certified NIRF Ranking 101-150 Pollachi,

Coimbatore - 642001 Tamil Nadu

**PROSPECTS OF ARTIFICIAL INTELLIGENCE (AI) AND
PERSONALIZED LEARNING IN INCLUSIVE EDUCATION
INTEGRATED TO THE NATIONAL EDUCATION POLICY (NEP) - 2020**

© **Chief Editors**

Dr.T.Mohana Sundari, *Assistant Professor, Department of Commerce (CA)*

Dr.P.Archanaa, *Assistant Professor & Head, Department of Commerce (CA)*

Editors

Dr.B.Indira Priyadharshini | Dr.T.Vijaya Chithra

Dr.P.Gomathi Devi | Dr.M.Deepa

Dr.M.Shanmuga Priya | Dr.R.Ramya

Assistant Professor, Department of Commerce (CA)

ISBN: 978-93-94004-29-0

Price: Rs. 650.00/-

Copyright

All rights reserved. No part of this book may be reproduced, stored in a retrieval system or transmitted. In any form or by any means, mechanical, photocopying, recording or otherwise, without prior written permission of the author.

Printed at

SHANLAXPUBLICATIONS

61, 66 T.P.K. Main Road

Vasanthanagar

Madurai - 625003

Tamil Nadu, India

Ph: 0452-4208765

Mobile: 7639303383

[email:publisher@shanlaxpublications.com](mailto:publisher@shanlaxpublications.com)

[web: www.shanlaxpublications.com](http://www.shanlaxpublications.com)

CONTENTS

S. No	Title	Page no.
1	Professional Development for Educators to Effectively Use and Integrate AI Tools into their Pedagogical Methods Trishya Chaurpagar	1
2	Bridging the Digital Divide: A Critical Challenge to Inclusive Education Under NEP 2020 Dr. T. Vanjikkodi	9
3	Study on “Investigating AI’S Role in Foundational Literacy and Numeracy (FLN) and Competency-Based Education (CBE) is a Central Goal of the National Educational Policy-2020” Dr. S. Ramachandran	13
4	Circular Economy Adoption through Digital Transformation and its Impact on Firm Performance in the Technology Sector Dr. N. Ponsabariraj & Dr. S. Sridevi	21
5	Internationalization and Digital Transformation in Higher Education Dr. Jogomaya Paul	25
6	A Study on Designing Adaptive Learning Platforms in the Context of NEP 2020’s Dr. K. Ganesh Kumar & Dr. M. Krishnaveni	31
7	Role of Artificial Intelligence in Promoting Inclusive Education in India Dr. K. Akila & S. Yamuna	35
8	Building Teachers AI Literacy Emphasized by the NEP 2020 Dr. C. Kothaiandal	40
9	Impact of Digital Divide on Online Education Dr. B. Divya Priya & Dr. K. Sudha	43
10	“Transforming Indian Education: Outcomes of the National Education Policy (NEP) and the Road Ahead” V. Murugesan	46
11	Artificial Intelligence and Personalized Learning: Transforming Inclusive Education Under NEP 2020 P. Divyabharathi	50
12	AI as a Learning Tool for Gen Z Learners in Line with Educational Reforms Mr. S. Rajagopalan & Dr. R. Shiddharthy	54
13	Professional Development for Educators to Effectively Use and Integrate AI Tools into their Pedagogical Methods Steffil Selcia	60

ARTIFICIAL INTELLIGENCE AND PERSONALIZED LEARNING: TRANSFORMING INCLUSIVE EDUCATION UNDER NEP 2020

P. Divyabharathi

Assistant Professor, Department of Commerce with (CA)
Nallamuthu Gounder Mahalingam College, Pollachi
divyabharadhi@ngmc.org

Abstract

The National Education Policy 2020 aims to develop a comprehensive educational environment that is focused around the learner, inclusive, and supported by technology, which will help to address the different cultures, economies and societies of India. Artificial Intelligence has become a driving force in supporting personalized learning as it relates to the NEP 2020, through adaptive learning systems, education-based intelligence tutoring systems and also assistive tools, since these enable educational providers to tailor the way they deliver education and content; create an environment where learners can access all learning materials; and create opportunities for adaptation and diversification of educational experiences of learners. This chapter critically evaluates the implications of AI in supporting the advancement and development of Personalized Learning as a vehicle to support Inclusive Education as set forth by NEP 2020, including by providing a framework for assessing how AI can support and develop personalized learning, through providing concepts, policy development and using AI from a pedagogical perspective. The chapter concludes that in order for AI to make a genuine impact in terms of the development of AI Gay, Equitable and Future Prepared, there needs to be equity with regards to access to technology; equitable access to support for and through teachers; and the use of AI within the framework of governance and ethical use within the framework of the NEP 2020. When used correctly, AI has the potential to change the course of the NEP 2020 objectives in the same way as technology has changed the delivery of education to learners through the structure and creation of Personalized Learning environments.

Keywords: Artificial Intelligence, Personalized Learning, Inclusive Education, NEP 2020, Educational Technology, Equity

Introduction

All education systems globally are dealing with the growth of learner diversity and equality, the rapid development of technology, and the rising expectations for quality and equality within education. India has some of the most significant challenges globally, with large disparities in socio-economics, a wide variety of languages, and a significant discrepancy in access to educational materials and resources. Therefore, the NEP 2020 has recommended transitioning away from the traditional approach to education (standardized and rigid) and adopting flexible and learner-oriented approaches to education that will support inclusivity (The Government of India, 2020).

Therefore, in response to the NEP 2020, there has been much focus on AI and how it can facilitate personalized learning for larger groups of students. AI, in contrast to other forms of digital technology, has the ability to provide teachers with immediate feedback on their students' progress through the collection and analysis of learner data, the identification of patterns and trends, and the updating of instructional strategies based on these findings.

These qualities are also closely aligned with the goals of inclusive education, which emphasize the need for educators to support diverse learning needs rather than have them conform to standardized instructional methods.

This chapter discusses how AI-enabled personalized learning can facilitate inclusive education in the context of the NEP 2020. The author situates AI within the broader policy priority framework of NEP 2020, investigates its potential pedagogical applications in an inclusive education setting, and highlights the key challenges related to the implementation of AI in the Indian education system.

Conceptual Framework: AI, Personalization, and Inclusion

Artificial Intelligence in Education

Artificial Intelligence in education refers to computational systems designed to support teaching and learning through automated decision-making, pattern recognition, and adaptive feedback. AI applications include intelligent tutoring systems, learning analytics dashboards, automated assessments, and assistive technologies. These systems rely on continuous data collection to refine instructional responses and learner support mechanisms (Chávez Benavides et al., 2025).

Personalized Learning

Personalized learning focuses on tailoring educational experiences to individual learner characteristics, including prior knowledge, learning pace, and preferred modes of engagement. AI enhances personalization by enabling continuous diagnostics and adaptive content delivery, thereby moving beyond static differentiation strategies commonly used in classrooms (Moharana, 2025).

Inclusive Education

Inclusive education seeks to ensure equitable participation and meaningful learning outcomes for all students, including those with disabilities, learning difficulties, and socio-economically disadvantaged backgrounds. NEP 2020 reinforces inclusion through provisions for universal access, assistive technologies, and flexible curricular pathways. AI-based personalization supports these objectives by offering scalable mechanisms for differentiated instruction (Melo-López et al., 2025).

Alignment of AI-Enabled Learning with Nep 2020 Goals

NEP 2020 recognizes technology as a critical driver of educational reform, while cautioning against uncritical adoption that could exacerbate inequality. The policy emphasizes that technological interventions must be inclusive, ethical, and learner-centered.

AI and Policy Priorities under NEP 2020

The establishment of the National Educational Technology Forum (NETF) reflects NEP 2020's intent to institutionalize evidence-based decision-making regarding educational technology. AI-enabled personalized learning systems can be evaluated, standardized, and scaled through such mechanisms, ensuring coherence with national educational goals.

Table 1: Mapping AI Tools to NEP 2020 Goals for Inclusive Education

NEP 2020 Goals	AI Tools / Technologies	Educational Contribution	Inclusive Outcomes
Universal access	Adaptive learning platforms	Customizes content and pace	Supports diverse learning speeds
Equity and inclusion	Learning analytics	Identifies at-risk learners	Enables targeted interventions
Learner-centric pedagogy	Intelligent tutoring systems	Personalized feedback	Enhances engagement and autonomy
Multilingual education	NLP-based translation tools	Language customization	Supports linguistic diversity
Education for children with disabilities	Assistive AI tools	Accessible learning materials	Promotes participation and equity

Applications of AI in Personalized and Inclusive Learning

Adaptive Learning Systems

Adaptive learning platforms dynamically adjust instructional content based on learner performance. Such systems are particularly valuable in heterogeneous classrooms, where students differ significantly in prior knowledge and learning pace. By enabling mastery-based progression, adaptive systems support NEP 2020's emphasis on competency-based education.

Intelligent Tutoring Systems

Intelligent tutoring systems simulate individualized teacher support by offering customized explanations, feedback, and practice activities. Empirical studies indicate that these systems can improve learning outcomes, particularly in contexts where teacher-student ratios are high (Chávez Benavides et al., 2025).

Assistive Technologies for Inclusive Education

AI-powered assistive technologies—such as speech recognition, text-to-speech, and visual recognition tools—play a critical role in supporting learners with disabilities. These technologies enhance access to curricular content and assessments, aligning with NEP 2020's commitment to inclusive education (Sharma et al., 2025).

Pedagogical Transformation and the Role of Teachers

AI-driven personalization does not diminish the role of teachers; rather, it redefines it. By automating routine diagnostic and administrative tasks, AI allows educators to focus on mentoring, emotional support, and higher-order pedagogical functions. NEP 2020's emphasis on continuous professional development makes AI literacy a critical component of teacher education.

Conclusion

India's NEP 2020 supports using AI and AI-enabled tools for personalized learning opportunities to improve access, equity and inclusivity by meeting the diversity of all learners with respect to age, gender, language and special needs through creating equal opportunities for opportunity, creating pathways for learning through multi-mode delivery methods and developing educators' digital and pedagogical competencies through the use of AIs.

References

1. Chávez Benavides, R. M., García Aldaz, J. B., García León, J. G., & Cárdenas Benavides, J. (2025). Impact of artificial intelligence on personalized learning: An analysis in higher education. *International Journal of Environmental Sciences*, 11(15s), 1058–1064.
2. Government of India. (2020). *National Education Policy 2020*. Ministry of Education.
3. Melo-López, V. A., Basantes-Andrade, A., Gudiño-Mejía, C. B., & Hernández-Martínez, E. (2025). The impact of artificial intelligence on inclusive education: A systematic review. *Education Sciences*, 15(5), 539.
4. Moharana, S. (2025). Prospects of artificial intelligence (AI) and personalized learning in inclusive education integrated to NEP-2020. *Asian Journal of Education and Social Studies*, 51(4), 109–116.
5. Sharma, D., Saxena, A. B., & Aggarwal, D. (2025). AI-powered personalized learning: Assessing its impact on academic achievement and development in students with disabilities. In *Language, Literature and Education: Research Updates* (Vol. 3, pp. 130–148).