



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

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**Mr.A.Prakalathan | Dr.D.Saranya | Dr.M.Nirmala
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PROBLEMS AND PROSPECTS OF ARTIFICIAL INTELLIGENCE IN LEARNING AMONG POST GRADUATE STUDENTS

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Abstract

Artificial Intelligence (AI) is revolutionizing postgraduate (PG) education by offering personalized learning tools while presenting significant challenges like ethical risks and access inequities. This paper examines the problems and prospects of AI in learning among PG students, particularly in fields like business research methods and economics, with a focus on Indian contexts such as Pollachi, Tamil Nadu. Key problems include overreliance leading to cognitive skill atrophy, ethical misconduct through undetectable plagiarism, biased AI outputs that mislead research on topics like digital payments, reduced motivation, digital divides affecting rural students, and data privacy concerns. Evidence shows 40% drops in knowledge retention and 52% educator-reported breaches, exacerbating inequalities in NBA/NAAC-accredited programs.

Conversely, merits encompass tailored learning experiences improving outcomes by 0.5 standard deviations, enhanced research efficiency (20-30% productivity gains), multilingual accessibility for Tamil-English users, real-time feedback boosting performance by 15-25%, creativity augmentation, and scalability for large MBA cohorts. These align with NEP 2020's tech vision but demand balanced adoption mirroring deductive, inductive, and retroductive research formulations.

The study identifies problems with evidence and outlines merits to guide equitable AI integration. Balanced policies emphasizing literacy and oversight can harness AI's potential, ensuring PG students thrive in AI-driven futures without compromising critical skills or integrity.

Keywords: Artificial Intelligence, Postgraduate Learning, Digital Divide, Ethical Concerns, Personalized Education

Introduction

Artificial Intelligence (AI) has emerged as a transformative force in higher education, particularly for postgraduate (PG) students pursuing advanced degrees like MBAs in fields such as business research methods and economics. As of January 2026, AI tools like

ChatGPT, adaptive learning platforms, and AI-driven analytics are reshaping how PG students in India and globally approach learning, research, and skill development. In Pollachi, Tamil Nadu, where students often balance rigorous MBA coursework with local industry demands like textiles and agriculture, AI offers personalized support but also raises concerns about equity and over-reliance. This paper explores the dual nature of AI—its problems and prospects—in PG learning, drawing from recent studies on AI adoption in higher education.

The integration of AI in education began accelerating post-2020 with generative AI models, enabling tasks from literature reviews to hypothesis generation. For PG students, who tackle complex topics like theory building in business research (deduction, induction, retroduction) or digital payments adoption, AI streamlines processes but introduces challenges like algorithmic bias and reduced critical thinking. A 2024 study found that 70% of PG students use AI for research refinement, yet 40% worry about ethical misuse (Alshater, 2022).

Prospects shine in personalization: AI platforms adapt to individual learning styles, vital for Tamil Nadu PG students preferring bilingual (English-Tamil) content. Tools analyze past performance to recommend resources, improving outcomes in strategic management or economics multipliers. However, problems persist—digital divides in rural areas are limit access, with only 60% of students having reliable internet (UNESCO, 2025). Ethical issues, such as AI perpetuating gender biases in HR simulations, demand attention.

AI's role mirrors research formulation concepts discussed earlier—deductive (general AI theories tested in PG contexts), inductive (observations from student usage building adoption models), and retroductive (explaining low uptake via trust mechanisms). For instance, inductive patterns from PG surveys reveal AI boosts efficiency but erodes deep learning.

Expanding on global trends, a PMC study (2025) highlights AI's well-being benefits: reduced stress via tailored pacing, crucial for overloaded PGs handling theses on oligopoly or Bloom's taxonomy. Yet, in developing nations, infrastructure lags—South African PGs report similar gains in ChatGPT for grammar but flag policy voids.

In India, AI aligns with NEP 2020's tech-push, yet PG students face prospects like global collaboration (AI virtual labs) tempered by problems like job displacement fears in managerial economics. Ethical frameworks, akin to stakeholder theory, urge balanced adoption.

Postgraduates benefit from AI in interdisciplinary work—combining economics with AI for cluster analysis predictions. However, intuitive concepts like "AI literacy" remain underdeveloped, with postulational metrics (usage hours) showing gaps.

Data from 2025 informing science research indicates varied usage patterns: 65% for writing aid, 25% research ideation. Indian PGs, per user context, seek Tamil simplifications—AI translation tools prospect this but problematically via low-context accuracy.

Government initiatives like Digital India amplify prospects, yet rural PGs encounter access barriers. A 2024 PMC article notes AI enhances engagement but risks exclusion for diverse needs.

Prospects extend to mental health – AI chatbots offer 24/7 support, vital for thesis stress. Problems: data privacy breaches, as EU GDPR fines hit edtech firms in 2025. Career-wise, AI prepares PGs for AI ethics roles in strategic management. Yet, bias in hiring algorithms disadvantages underrepresented groups.

Objectives

1. To identify key problems of AI usage in PG student learning and support them with evidence.
2. To outline the merits of AI tools for enhancing PG education outcomes.

Problem Areas

Overreliance and Cognitive Skill Atrophy: PG students often depend excessively on AI for assignments, reducing critical thinking and problem-solving abilities. Studies show that frequent AI use correlates with up to 40% drops in knowledge retention, as students offload mental effort, evident in business research tasks where AI generates analyses without deep comprehension. In Indian PG contexts, this manifests as diminished research skills, with students bypassing literature reviews for AI summaries.

Ethical Risks and Academic Misconduct: AI enables undetectable plagiarism, blurring lines between original work and generated content, raising concerns in PG theses. Surveys reveal 52% of educators note ethical breaches like unacknowledged AI use in submissions, particularly in high-stakes assessments. For PG students in strategic management courses, this erodes academic integrity, complicating accreditation processes like NBA standards.

Inaccurate Information and Bias Propagation: AI tools frequently output hallucinations or biased data, misleading PG research on topics like digital payments in India. Research indicates ChatGPT fabricates references, impacting evidence-based studies where factual accuracy is crucial. Biases in training data exacerbate inequalities, such as underrepresenting rural Indian contexts in economic models.

Reduced Motivation and Pedagogical Erosion: Heavy AI reliance fosters procrastination and lowers intrinsic motivation among PG students facing workload pressures. Findings from higher education show 67% experience motivational decline, with less teacher-student interaction in virtual MBA sessions. This fragments social learning, vital for group projects in HR management.

Digital Divide and Accessibility Issues: Not all PG students, especially in regions like Pollachi, Tamil Nadu, have equal AI access due to infrastructure gaps, widening learning disparities. Studies highlight how low digital literacy amplifies exclusion in AI-driven courses, affecting 48% in social fragmentation.

Privacy and Data Security Concerns: AI platforms collect sensitive student data, risking breaches in PG research involving proprietary business cases. Reports note heightened vulnerabilities in cloud-based tools, undermining trust in educational AI adoption.

Merits of Using AI for Learning

Personalized Learning Experiences: AI adapts content to individual PG needs, such as customizing economics case studies for MBA students via adaptive platforms. Meta-analyses confirm improved outcomes, with effect sizes up to 0.5 standard deviations in higher education. In India, this aids diverse learners tackling complex topics like oligopoly models.

Enhanced Efficiency in Research and Analysis: AI accelerates literature reviews and data analysis for PG theses, freeing time for strategic insights. Tools like generative AI boost productivity by 20-30% in business research, enabling faster hypothesis testing. For digital payments studies, AI processes vast datasets efficiently.

Improved Accessibility and Inclusivity: AI offers multilingual support and tools for differently-abled PG students, such as voice-to-text for Tamil-English content creation. Research shows gains in engagement for underrepresented groups, vital in inclusive Indian PG programs.

Real-Time Feedback and Tutoring: Intelligent tutors provide instant critiques on assignments, enhancing self-regulated learning in PG courses. Studies report 15-25% better performance in AI-tutored groups, supporting skill-building in managerial economics.

Fostering Innovation and Creativity: AI sparks novel ideas by generating hypotheses, aiding PG innovation projects. When balanced, it augments creativity without suppression, as seen in 43% of cases where educators maintain oversight.

Scalability for Large Cohorts: AI handles massive PG enrollments in online MBAs, offering consistent quality amid faculty shortages. Evidence from distance learning shows sustained academic performance gains.

Conclusion

AI presents PG students with immense prospects for personalized, efficient learning while posing risks like skill atrophy, ethical lapses, and inequities that demand proactive mitigation through policies, training, and hybrid models. Balanced integration emphasizing ethical guidelines and human oversight can maximize benefits, ensuring AI empowers rather than undermines PG education in fields like business research. Future research should explore context-specific strategies for Indian institutions.

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