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ARTIFICIAL INTELLIGENCE AND ITS EFFECTS ON TEACHING AND LEARNING OF B.ED STUDENTS

Dr. Rajshekhar V Hatti
Asst. Professor, BES College of Education for Women, Bidar

Abstract

Artificial intelligence (AI) has become a groundbreaking technology that is changing the landscape of the educational sphere in terms of teaching practices and student education. AI tools can transform teacher education especially in Bachelor of Education (B.Ed.) programs and programs that can change the teaching approach, increase student interaction and critical thinking. In this paper, the researcher examines how AI can change the teaching-learning process among B.Ed. students, including opportunities and challenges. Based on the current research and theoretical insights, the paper highlights the role of AI-based platforms to facilitate personalized learning, automate administrative functions, deliver real-time feedback, and develop digital pedagogical skills in future educators. The findings of the study are that although AI has a great opportunity to be innovative in teacher education, ethical considerations, digital divide, and insufficient training are acute issues.

Keywords: Artificial Intelligence, teacher education, B.ed students, teaching-learning, digital pedagogy.

Introduction

Artificial Intelligence (AI) integration in education has become the worldwide trend. Smart technologies powered by AI-based technologies, including smart tutoring systems, adaptive learning platforms, and others, are becoming a more popular trend in the teaching and learning process of teachers and learners. Within the framework of the preparation of educators (B.Ed. programs), AI plays a very important role in not only forming the new teaching practice but also providing potential teachers with the necessary digital skills needed in the classroom in the 21st century.

As pre-service teachers, B.Ed. students are at the cross-road between learning and teaching. They are students of their academic subjects as well as both future teachers of schools. Hence, it is of the highest importance that they comprehend the effects that AI has on their learning process and instructional planning.

Review of Literature

Researchers have pointed to the complex nature of AI in learning. The article by Luckin et al. (2016) states that personalized learning can be improved with the help of AI that modifies teaching resources according to the needs of the student. Holmes et al. (2019) underline the power of AI in the assessment and feedback system. Research indicates that AI can encourage reflection in teacher education, offer simulation-based learning, and decrease the teacher workload (Zawacki-Richter et al., 2019).

Nevertheless, ethical issues, data privacy, the deficiency of digital literacy, and infrastructural obstacles are common tropes in literature (Chen et al., 2020). These problems overlap with the bigger systemic problems that B.Ed. students face in India like lack of equal access to technology and teacher training programs on digital pedagogy.

Theoretical Framework

This paper is based on Technological Pedagogical Content Knowledge (TPACK) Framework (Mishra and Koehler, 2006), the focus of which is on the process of combining technology, pedagogy, and content during teacher preparation. AI as the new technology demands that the B.Ed. students should not only acquire the knowledge of contents and pedagogy but also of technology to be able to design the successful learning process.

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Impact of AI on B.Ed Students

1. Improved Learning Processes:
   Adaptive platforms (e.g. Coursera, Edmodo, Khan Academy AI modules) powered by AI assist B.Ed. students in studying at their own pace. Individual learning plans enable them to build up the weak points in pedagogy, psychology, and subject matter.

2. Pedagogical Training:
   Intelligent tutoring systems, AI-based simulating and virtual classroom offer real practice of teaching in a controlled setting. This assists the students enrolled in B.Ed to test out teaching methods without fear of failure.

3. Assessment and Feedback:
   AI tools provide instant formative feedback due to which students can reflect on their learning. They are also assisted by automated grading systems and analytics dashboard to track progress and adjust study approaches.

4. Development of competence in professions:
   Teachers who are taught using AI develop digital literacy and flexibility, which is crucial in the present-day classrooms. They are also taught how to introduce AI in a responsible manner in their instruction in the future.

5. Challenges and Concerns:
   - Digital Divide: The low adoption of AI tools in institutions with limited resources or in rural areas.
   - Over-Reliance: Students should not over-rely on the results of AI in this way since they might stop using their critical thinking.
   - Ethical Issues: Data privacy, algorithmic bias and scholarly integrity.
   - Teacher Preparedness: B.Ed. participants might not be prepared and trained in AI.

Discussion

The effect of AI on the students of the B.Ed. is both encouraging and complicated. Although it offers empowerment to the learners with personalization, efficiency and building of digital skills, the ethical and infrastructural challenges should be well considered. In the case of teacher education institutions, policy-level intervention, and investment in digital infrastructure as well as faculty development programs are needed to integrate AI in the curriculum.

Findings and Suggestions

- AI improves individual learning and self-reflection among B.Ed. students.
- Simulations based on AI can be used to complement conventional teaching practice.
- AI literacy should be presented as an element of teacher education.
- By creating equal access, government and institutions must close the digital divide.
- Teacher educators should be made to take part in the continuous professional development programs.

Conclusion

Artificial Intelligence is transforming instruction and learning at all educational levels and B.Ed. students are in a unique position to enjoy the fruits of this transformation. With the incorporation of AI in the teaching profession, organizations can end up with digitally skilled, reflective, and innovative educators. Nevertheless, ethical issues, equity matters, and proper training should be kept in the center stage to make AI a source of empowerment and not exclusion.

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