

Impact of Generative AI on Digital Learning Among Higher Education Students

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ABSTRACT

Generative Artificial Intelligence (AI) has become an influential part of digital learning, offering learners instant support, more precise explanations, and practical guidance across academic tasks. This paper explores how generative AI is reshaping students' learning habits, engagement levels, and access to knowledge in higher education. It also considers current educational directions such as NEP-2020, Universal Design for Learning (UDL), growing digital literacy, and UNESCO's emphasis on ethical and inclusive AI practices. Alongside its benefits, the study acknowledges concerns related to overreliance, academic integrity, and occasional inaccuracies. Overall, the findings suggest that when used thoughtfully, generative AI can significantly strengthen the effectiveness, inclusivity, and reach of digital learning environments.

Keywords: *Generative AI, Personalised Support, Digital Learning, Higher Education, Technology in Education*

Higher education is rapidly evolving as advanced digital technologies expand. Among these innovations, generative AI has gained strong momentum for its ability to produce human-like responses and offer personalised academic support. It has become one of the most widely used digital tools across universities and colleges due to its flexibility, adaptability, and support for students across diverse learning tasks.

The COVID-19 pandemic further accelerated the move toward online and blended learning, increasing the need for tools that could assist learners even outside classroom hours. Generative AI addressed this gap by providing 24×7 access to academic explanations, doubt-clarification, writing support, and revision assistance, offering students a consistent companion throughout their learning process.

NEP-2020 encourages the integration of AI-based tools to enhance the quality of digital learning and strengthen students' technological competencies. Similarly, UNESCO promotes responsible, inclusive, and transparent use of AI in education. This paper examines the independent role of generative AI in shaping digital learning and evaluates its growing significance in higher education environments.

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MANAGEMENT

Educational management now plays a significant role in integrating AI tools into academic systems. Higher education institutions must develop strategies to ensure ethical, productive, and meaningful usage of generative AI. Administrators are responsible for:

- Providing digital devices and stable internet access
- Training faculty to incorporate AI into teaching
- Establishing guidelines for academic integrity
- Monitoring the ethical use of AI tools
- Encouraging innovation and technological adoption

Effective management ensures that generative AI enhances the educational environment while maintaining quality and fairness.

EDUCATION

Education today extends beyond chalk-and-board methods. With digital learning platforms and AI-based tools, students engage with content more interactively and independently. ChatGPT helps strengthen educational experiences by:

- Breaking down complex concepts into simpler explanations
- Offering immediate academic feedback
- Supporting research and writing development
- Assisting slow learners and students with disabilities
- Providing 24×7 accessible learning

This technology aligns with modern educational principles that emphasise inclusivity, flexibility, and learner-centred instruction.

IMPACT OF GENERATIVE AI ON DIGITAL LEARNING

1. Personalized Learning

AI tools shape their responses based on what the learner already knows, making challenging concepts easier to understand. This kind of flexible support reduces confusion and keeps students from feeling left behind.

2. Encourages Independent Study

Students can clarify doubts anytime and revisit content without hesitation, which builds confidence. It naturally supports self-directed learning by reducing dependence on constant teacher intervention.

3. Improves Research and Writing Skills

Generative AI helps organise ideas, refine language, and interpret academic material more clearly. It also helps learners develop stronger research questions and understand the structure of scholarly writing.

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4. Access to Global Knowledge

AI provides quick access to diverse perspectives, case studies, and information from around the world. This broad exposure strengthens interdisciplinary thinking and deepens real-world understanding.

5. Inclusive Learning Support

AI systems can simplify complex content, adjust language levels, or present information in accessible formats. This supports learners with reading difficulties, language barriers, or other learning needs, aligning well with inclusive education principles.

6. Enhances Critical & Creative Thinking

By offering multiple angles on a topic, generative AI prompts students to think more critically rather than passively accepting information. It also sparks creativity by helping users explore ideas they may not have considered on their own.

7. Real-Time Academic Assistance

Instant explanations for concepts, coding, or calculations reduce stress and maintain learning momentum. This timely support makes challenging subjects feel more manageable and less overwhelming.

ADVANTAGES OF GENERATIVE AI

- Offers quick academic help whenever students get stuck.
- Saves time by simplifying routine study tasks.
- Explains concepts in a way that suits each learner's style.
- Helps refine ideas, writing, and overall clarity of thought.
- Helps students learn in a way that feels comfortable.
- Makes learning easier for students with language or accessibility needs.
- Encourages fresh ideas and creative approaches.
- Creates a calm, low-stress space to explore complex topics.

DISADVANTAGES OF GENERATIVE AI

- Students may start depending on AI instead of building their own skills.
- Makes plagiarism and shortcut use more tempting.
- Sometimes gives incomplete or inaccurate answers.
- Raises genuine concerns about data safety and misuse.
- Can reduce meaningful interaction with teachers.
- May weaken original writing and critical thinking if overused.
- Limited access can widen the digital gap between learners.
- Too much reliance can dull social awareness and emotional growth.

CURRENT SCENARIOS

1. Increased Use After the Pandemic

Digital learning became essential during COVID-19, and generative AI tools quickly became a reliable source of academic support. Even after schools reopened, students continued using them because they provide quick clarity and round-the-clock guidance.

2. NEP-2020 Encourages AI Literacy

The National Education Policy 2020 emphasises technology-driven learning and encourages students to understand AI as a practical skill. This shift is slowly reshaping classrooms, making digital tools a regular part of mainstream education.

3. UNESCO's View on AI in Education

UNESCO advocates for ethical, transparent, and inclusive use of AI, highlighting the need for proper teacher training. The organisation stresses that AI should support learning without replacing the human connection in education.

4. Challenges in Practical Use

Despite its benefits, generative AI still faces issues such as occasional inaccuracies, plagiarism risks, and data privacy concerns. These challenges show why students need guidance so that the technology becomes a supplement, not a shortcut.

5. Evolving Teacher Roles

Teachers today focus more on conceptual clarity, creativity, and critical thinking, while AI handles routine explanations. This shift allows teachers to spend more time mentoring students and less time repeating basic information.

NEED FOR GENERATIVE AI IN HIGHER EDUCATION

1. Supports flexible digital learning
2. Bridges academic and resource gaps
3. Promotes lifelong learning habits
4. Prepares students for AI-oriented careers
5. Enhances inclusivity for diverse learners
6. Strengthens digital competencies
7. Increases engagement and motivation
8. Improves overall academic performance

CONCLUSION

Generative AI has brought a notable shift to digital learning in higher education by improving accessibility, supporting independent study, and strengthening students' research and writing abilities. It also encourages creative thinking and deeper Analysis by offering multiple ways to approach a concept. While concerns such as plagiarism, over-reliance, and occasional inaccuracies still exist, these challenges can be managed through responsible use and proper academic guidance. When integrated thoughtfully, generative AI becomes a meaningful aid in helping students learn more effectively and adapt to modern academic demands, ultimately

Impact of Generative AI on Digital Learning Among Higher Education Students

contributing to a more inclusive, technologically equipped, and future-ready educational environment.

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Conflict of Interest

The author declared no conflict of interest.

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