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No	Ref	Title	Adaptive Learning	GAI Ethical Issue	Interventions
1	[1]	Cross-lingual Transfer in Generative AI-Based Educational Platforms for Equitable and Personalized Learning	GAIs offer customized instructional materials based on individual learning preferences and skill levels. They can use cross-lingual transfer methods to overcome language barriers and provide tailored information.	– Potential biases – Fairness – Misinformation and hallucinations – Bias	– Vigilance in monitoring and mitigating – Ethical AI guidelines – AI regulations
2	[2]	The impact of artificial intelligence on learner–instructor interaction in online learning	GAIs facilitate personalized or adaptive learning experiences and can provide valuable assistance in online education by tailoring the learning experience to individual students, automating repetitive activities for instructors, and facilitating adaptive evaluations	– Security and privacy – Transparency – Explainability	– Develop AI ensuring Explainability and Transparency – Human-in-the-loop approach to AI design – Ethical data Collection and Presentation
3	[3]	The Effects of Explanations in Automated Essay Scoring Systems on Student Trust and Motivation	AI can support automated essay grading and intelligent tutoring. They can support self-assessment and metacognitive processes which are key aspects of adaptive and personalized learning	– Explainability – Transparency – Trust – Accuracy	– Develop explainable AI systems for education – Adopt User-centered design
4	[4]	Leveraging ChatGPT for Higher Education Course Offerings	GAI tools and technologies in higher education may provide substantial advantages, particularly in personalized learning, on-demand learning plans, feedback, and access to resources as required.	– Misinformation and hallucinations – Bias – Overreliance – Privacy and security	– AI Ethical Guidelines – Training of GAI users – Appropriate Prompting

5	[5]	Chatting Up the Grade: An Exploration on the Impact of ChatGPT on Self-Study Experience in Higher Education	allowing them to set preferences for how they learn and identify areas where they may struggle. Customised system could develop an individualized learning path for students, thereby contributing to adaptive and personalized learning experiences	– Academic integrity	– Implementing Explainable AI – Educating Users – Contextual Integration – Collaboration and Reflection
6	[6]	Challenges and Opportunities of Generative AI for Higher Education as Explained by ChatGPT	GAIs like ChatGPT can provide personalised feedback, explanations, and recommendations based on individual student queries, promoting self-directed learning, and stimulating critical thinking and debates among students.	– Academic integrity – Plagiarism detection – Impact on critical thinking skills – Bias – Accuracy	– Clear policies and guidelines – Transparency, Accountability – User-centered design approaches to system development – Regular monitoring – Bias detection tools through audits
7	[7]	Beyond Traditional Teaching: The Potential of Large Language Models and Chatbots in Graduate Engineering Education	Incorporating GAIs and chatbots in graduate engineering education can enable personalized learning by tailoring content to individual needs. Chatbots can provide immediate feedback and tailored assistance, allowing students to learn at their own pace. Chatbots can promote self-paced learning and help students develop independent critical thinking skills. GAI can support automated tutoring, automated grading, and course management	– Overreliance – Misinformation and Hallucination – Fairness – Transparency – Security and privacy – Outdated Knowledge	– Appropriate prompt engineering (Input-Output, Chain of Thought, and Tree of Thoughts prompt engineering) – Responsible Adoption – Ethical AI Guidelines
8	[8]	Empowering Education with Generative Artificial Intelligence Tools: Approach with an Instructional Design Matrix	By using GAI technologies with an instructional design matrix, educators can create and provide tailored and immersive educational experiences. Virtual assistants provide tailored guidance, encourage problem-solving, and encourage the exploration of new ideas.	– Bias – Privacy and security – Fairness – Accuracy – Overreliance – intellectual property	– Establish clear guidelines and policies – Ensure responsible and ethical use of GAI tools

9	[9]	Generative artificial intelligence empowers educational reform: current status, issues, and prospects	The GAIs can offer personalized learning plans and teaching content tailored to students' individual progress and abilities. GAIs can automatically adapt the course's difficulty and content based on students' performance, offering suitable learning tasks and exercises. GAI can analyze students' learning data to understand their needs and weaknesses	– Explainability – Privacy and security – Fairness – Transparency	– Developing Explainable and Fair Algorithms – Upgrading Encryption Technology – Formulating Relevant Laws and Regulations – Improving the Quality and Quantity of Datasets by updating it
10	[10]	Engineering Education in the Era of ChatGPT: Promise and Pitfalls of Generative AI for Education	GAIs provide the capacity to provide tailored and efficient learning experiences by furnishing students with personalised feedback and explanations, in addition to generating lifelike virtual simulations for practical learning.	– Bias – Misinformation and hallucinations – Fairness – Academic integrity	– Developing Explainable, transparent, interpretable, fair, privacy and security GAI Algorithms – Improving the Quality and Quantity of Datasets through audits and updates – Develop GAI ethical Standards
11	[11]	Student Perceptions of AI-Generated Avatars in Teaching Business Ethics: We Might not be Impressed	AI-generated avatars have the potential to contribute to personalized and adaptive learning experiences by offering customization and interactivity, which could positively impact student engagement and learning outcomes	– Bias – Transparency – Fairness	– Transparency, Explainability Strategies and Bias Mitigation – GAI Ethical Frameworks

12	[12]	Strategic leadership for responsible artificial intelligence adoption in higher education	GAI has the capacity to revolutionise higher education by enhancing learning, research, and leadership in academic institutions. They have the potential to customize instruction, provide real-time assessment, detect at risk students, speed up finding new research, simplify administrative tasks with the help of chatbots, and enhance the efficient use of resources.	– Accountability – Transparency – Explainability – Bias – Fairness – Security and privacy – Trust	– Developing specific strategic plans – Codes of ethics – User-centered design – Targeted funding to support the long-term impact of AI in higher education
13	[13]	Ethical principles for artificial intelligence in education	The paper recognizes the potential benefits of personalized or adaptive learning facilitated by AIED while also highlighting the ethical considerations and the need to ensure that the implementation of such learning approaches aligns with ethical principles, transparency, and respect for learner autonomy.	– Bias – Accountability – Security and Privacy – Fairness	– Governance and Stewardship – Transparency and Accountability – Privacy and Security Measures – Inclusiveness and Fairness – Human-Centered AIED
14	[14]	Embracing the Future: AI's Transformative Potential in Educational Research	GAI algorithms can develop personalized learning platforms that adapt to each student's needs, delivering tailored content, assessments, and feedback. This individualized approach has the potential to revolutionize education by fostering improved engagement, motivation, and academic performance	– Fairness – Bias – Privacy and Security	– Establishing robust ethical frameworks and guidelines – Collaboration and interdisciplinary approach – Thoughtful integration and responsible use of AI

15	[15]	ChatGPT is not capable of serving as an author: ethical concerns and challenges of large language models in education	The paper emphasizes the benefits of AI in addressing the unique needs of students with disabilities and has the potential to personalize learning, provide real-time feedback, and enhance student engagement	– Misinformation and hallucinations – Overreliance – Bias – Accountability – Transparency – Security and Privacy – Academic Integrity	– Educators and learner training – Develop ethical guidelines and regulations. – Employ human-centric design. – Employ appropriate prompts – Regularly audit and update training data
16	[16]	Leveraging LLMs for Adaptive Testing and Learning in Taiwan Adaptive Learning Platform (TALP)	GAI algorithms provide several benefits, including tracing learning paths across students, visualising learning paths, and eliminating unnecessary test items during diagnosis, increasing the accuracy of identifying learning weaknesses by up to 90% while simultaneously reducing unnecessary items during testing by up to 80%.	– Accuracy – Privacy – Bias	– Ensure development and use of Responsible AI
17	[17]	Education in the Era of Generative Artificial Intelligence (AI): Understanding the Potential Benefits of ChatGPT in Promoting Teaching and Learning	The benefits of GAIs such as ChatGPT include but are not restricted to advancement of personalized and interactive learning, generating prompts for formative assessment tasks that provide continuous feedback to inform teaching and learning	– Bias – Security and Privacy – Misinformation and hallucinations	– Develop Detection tools – Train learners and teachers on ethical use – Develop frameworks and policies for AI ethical use.
18	[18]	Revolutionizing Blended Learning: Exploring Current Trends and Future Research Directions in the Era of ChatGPT	GAI chatbots provide personalized learning experiences for individual students, leading to improved engagement and better learning outcomes. GAIs enhance learner engagement, motivation, and self-regulated learning via real-time feedback and assistance.	– Fairness – Bias – Academic integrity – Overreliance	– Establish ethical guidelines – Responsible AI deployment and use. – Train users both the teachers and educators.

19	[19]	Enhancing Chemistry Learning with ChatGPT and Bing Chat as Agents to Think With: A Comparative Case Study	GAIs provide a more dynamic and individualised learning experience, promoting active learning, personalised instruction, and conceptual understanding across various domains.	– Accuracy – Privacy – Bias – Misinformation and hallucinations	– Appropriate prompt creation – Training Users
20	[20]	Generative AI, learning and new literacies	GAIs have capability to support personalized learning, develop 21st-century Skills among learners, foster self-regulated learning, and enhance information accessibility.	– Bias – Privacy and security – Accuracy – Transparency	– Develop standard guidelines – Employ Responsible AI approaches – Develop AI tools and training users.
21	[21]	Assisting ELT Teachers: Designing Activities for the Use of ChatGPT in Teaching and Learning	By creating replies to learners' inputs, delivering feedback, and generating content, GAI has the potential to assist language acquisition and content-based training. GAI can be used to provide tailored feedback and support to each learner, enabling them to progress at their own pace thus supporting adaptive learning experiences.	– Overreliance – Security and Privacy – Bias – Accuracy – Transparency – Trust	– Ethical GAI Guidelines – Ensure Responsible GAI use – Conduct training for users
22	[22]	New Vistas on Responsible Learning Analytics: A Data Feminist Perspective	Responsible Learning Analytics are relevant for creating AI systems for personalized and adaptive learning	– Bias – Fairness – Accountability – Transparency – Privacy and Security	– Design ethical frameworks – Create AI guidelines – Establish codes of praxis
23	[23]	Artificial Intelligence in Education: AIEd for Personalised Learning Pathways	AI is helpful in developing personalised learning paths, such as 24/7 access to training, training in virtual environments, modification of educational material to students' particular requirements, real-time and frequent feedback, advances in the educational process, and mental stimulations	– Misinformation and Hallucination – Transparency – Bias – Privacy and Security – Accountability – Beneficence – Fairness	– Adhere to Ethical Guidelines for Trusted AI – Establish guidelines where they are not. – Design, deploy and use AI systems responsibly

24	[24]	Revolutionizing ESL Teaching with Generative Artificial Intelligence—Take ChatGPT as an Example	GAI has laid the groundwork of language education automation and personalization. GAI can improve the efficiency of English learning, improving skills such as listening, speaking, reading, and writing	– Accuracy – Outdated information – Academic integrity – Misinformation and Hallucination	– Proper prompt engineering
25	[25]	Leveraging ChatGPT Capabilities in Vietnamese High School Mathematics Education	GAI can potentially transform teaching and learning, leading to a more adaptive, personalized, and interactive mathematics education experience in the digital age	– Fairness – Bias – Accuracy – Privacy and Security	– Develop stringent data privacy policies – Responsible AI use and digital ethics into the curriculum.
26	[26]	ChatGPT: A new study tool shaping the future for high school students	GAI-powered tools have the potential to contribute to personalized learning experiences by assisting students in their academic pursuits	– Accountability – Transparency – Bias – Explainability – Misinformation and Hallucinations	– Ethical GAI Guidelines – Algorithmic Audits – Education and Awareness – Responsible AI Use
27	[27]	ChatGPT and its impact on education	GAI like ChatGPT have the potential to enhance the education system by providing instant feedback, personalized learning experiences and 24/7 availability	– Misinformation and Hallucinations – Academic integrity – Fairness – Overreliance – Bias – Transparency – Accountability – Privacy and Security	– Ensure use of clear guidelines. – Develop detection tools – Train learners and educators

28	[28]	Artificial Intelligence in Education: Can AI bring the full potential of personalized learning to education?	AI-enabled Adaptive learning systems automate assessments, provide analytical dashboards, and classroom monitoring. AI closes the gap of teachers' lack of time to do one-on-one instruction	– Accuracy – Explainability – Transparency – Trust – Privacy and security – Bias	– Develop a certification for responsible AI model usage – Train teachers and learners on AI use – Develop Guidelines and policies for AI use

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