

Are we prepared to welcome AI into our classroom?

Description



Integrating artificial intelligence (AI) into various aspects of our lives has become normal nowadays. Education, as an essential part of our lives, is no exception to this transformative technology. AI in education has emerged as a crucial topic, and there has been an increase in efforts to bridge the gap between educators and the potential of AI to enhance learning experiences. AI will have to undergo a series of tests to be modified to fit our education system, just like all other teaching and learning

materials brought into the classroom. However, to dive into it, we must first know what it is. I've always wondered, would the damages that media and the internet have caused have been less profound if we were proactive and better prepared? Would there have been a difference if we had the knowledge, wisdom, and collaboration with all stakeholders to teach our children how to use it best before it came out of the box? Even with AI, students already have their hands on them and probably know how to use and navigate them better than educators. My pedagogy philosophy comes from preparing children for the real world. We can argue all day long about whether AI should be considered for K-12 classrooms. However, we must remember that at the same time, the reality is it is being incorporated into the real world and evolving rapidly.

Question: What is the best practice for incorporating technology like AI into K-12 classrooms?

What is AI?

AI, or artificial intelligence, refers to the simulation of human intelligence in machines programmed to perform tasks that require human cognition. This advanced technology can analyze data, recognize patterns, make predictions, and learn from past experiences, all with incredible efficiency. AI offers immense potential in education to personalize learning experiences, identify individual students' needs, and provide tailored support, thereby revolutionizing traditional teaching methodologies (Retrieved from ChatGPT).

1. Narrow AI (Weak AI):

Narrow AI, or Weak AI, refers to AI systems designed and trained for a specific or limited range of tasks. These AI systems excel in performing particular functions but cannot generalize beyond their designated tasks. Examples include virtual assistants like Apple's Siri or Amazon's Alexa, which are designed for natural language processing and answering questions.

2. General AI (Strong AI):

General AI, also known as Strong AI or AGI (Artificial General Intelligence), represents AI systems with human-like cognitive abilities. These AI systems can understand, learn, and apply knowledge across a wide range of tasks similar to human intelligence. However, as of now, true General AI remains theoretical and has not been fully realized.

3. Artificial Superintelligence:

Artificial Superintelligence refers to AI systems that surpass human intelligence in virtually every aspect. It would have the capability to perform intellectual tasks at a level far superior to human capabilities. Artificial Superintelligence is a concept that is currently only explored in theoretical discussions and remains a subject of debate and speculation.

4. Machine Learning:

Machine Learning is a subset of AI that enables machines to learn from data and improve their performance over time without explicit programming. Machine Learning algorithms identify patterns and relationships in data to make predictions and decisions. Common types of Machine Learning include supervised, unsupervised, and reinforcement learning.

5. Deep Learning:

Deep Learning is a specialized form of Machine Learning that employs artificial neural networks to process and interpret complex data. Inspired by the structure of the human brain, deep learning algorithms excel in tasks like image recognition, natural language processing, and speech recognition. Deep Learning has been instrumental in significant advancements in AI applications.

6. Expert Systems:

Expert Systems are AI programs designed to emulate the decision-making abilities of a human expert in a specific domain. They use rule-based systems to process knowledge and provide

expert-level recommendations and solutions to complex problems in areas like medicine, finance, and engineering.

7. Natural Language Processing (NLP):

NLP is a field of AI that focuses on enabling computers to understand, interpret, and generate human language. NLP algorithms are used in various applications, such as chatbots, language translation, sentiment analysis, and voice recognition.

Solution:

Partnering with Educators to Evaluate Efficacy

Engage educators, school administrators, parents, and community members in decision-making. Their insights and perspectives are valuable in understanding students'™ needs and ensuring that AI tools align with education goals. Educators become proactive by getting involved in the design and testing phases. They can provide insights into the specific needs of their students, contributing to the development of more targeted AI applications. Also, conduct pilot testing of the AI applications in a controlled environment before full implementation to identify potential areas of improvement. Through the partnership, there can be professional development opportunities for educators to familiarize themselves with strategies for integrating AI into their classrooms (Langreo, 2023).

Is it Culturally Relevant?

Culturally relevant AI tools are designed to recognize and respect students'™ diverse backgrounds and experiences. Educators can foster inclusivity and create a supportive learning environment where students from various cultural backgrounds feel valued and represented (Melo, 2022) by integrating culturally relevant content into AI-driven learning platforms. Examine and collaborate with developers to adapt content where necessary to address any gaps in cultural representation.

Is it Developmentally Appropriate?

Adhering to developmentally appropriate practices is essential when incorporating any content into the classroom, including AI. Each student has a unique learning pace and style, and AI can help address these individual differences. Tailored learning materials and challenges to students'™ developmental stages and abilities enhance engagement, providing opportunities for students'™ voices in the evaluation process. AI can be used to personalize learning paths for students, considering their learning styles, cultural backgrounds, and developmental levels (Forbes, 2023).

Does it Align to Content Standards?

Before implementing AI in the classroom, conduct a thorough needs assessment to understand your student'™s specific requirements, challenges, and learning environment (Langreo, 2023). To ensure the seamless integration of AI into the educational landscape, it is crucial to align AI-powered tools with established content standards consistent with educational goals. Also, regularly monitor the performance and impact of AI applications in the classroom. Stay up-to-date with research and advancements in AI to ensure that the tools remain current with content standards.

Conclusion

Informing Procurement Decisions and Adoption

When evaluating the potential adoption of AI in classrooms, informed decision-making is vital. Administrators and decision-makers can gather comprehensive data on the impact of AI on student learning and engagement from educators. There is a need to implement strict data privacy and security measures to protect students'™ sensitive information when using AI to ensure compliance.

AI should be seen as a supportive tool that empowers educators and enhances student learning outcomes. As AI continues to evolve, educators should stay informed to understand the impact of AI and actively get involved to ensure best practices. I've organized the solution in accordance with ISTE Coaching Standard 3 Collaborator to show that implementing culturally relevant, developmentally appropriate, and content-aligned AI tools can create inclusive and personalized learning that could cater to the unique needs of every student. Partnering and working hand-in-hand with educators, we can unlock the full potential of AI in classrooms and pave the way for the future of Learning.

References

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Category

1. Blog

Date Created

July 23, 2023

Author

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