PARADIGMS OF ARTIFICIAL INTELLIGENCE IN EDUCATION

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The use of artificial intelligence (AI) in education has grown in popularity as computing and information processing techniques have advanced. AIEd, or artificial intelligence in education, presents new possibilities, difficulties, and opportunities for teaching methods. In its brief history, AIEd has experienced several paradigm shifts, including the following three: learner-as-leader, learner-as-recipient, learner-as-collaborator, learner-as-supported, and learner-as-empowered. Three approaches address learning and educational difficulties in different ways by utilizing AI technology.

Learner-centered, data-driven, individualized learning has been produced through the frequent application of AIEd. Learner agency and personalization have been strengthened, learners can now reflect on their learning and help AI systems adapt, and more.

The development of AIEd has generally been divided into two phases: Paradigm One, which is learner-as-recipient and AI-directed, and Paradigm Two, which is learner-as-collaborator and AI-supported. In addition to allowing learners to reflect on their learning and help AI systems adjust appropriately, these phases are intended to promote learner agency, empowerment, and personalization and lead to an iterative evolution of learner-centered learning. However, it is now approaching learner-as-leader and AI-powered Paradigm Three.

Artificial intelligence (AI) has been seen as a powerful instrument to support new paradigms for educational research, technological growth, and instructional design since

the founding of AIEd about thirty years ago. Otherwise, it would be impossible to incorporate these ideas into traditional teaching approaches.

The transition to individualized learning, the complexity of the instructor's job, and the growth of complex educational systems are some of the new opportunities, possibilities, and problems that AIEd has brought to educational breakthroughs. The domains of education and computer science have developed intelligent learning environments for behavior detection, prediction model building, learning recommendation, etc., using a range of AIEd techniques, such as natural language processing, artificial neural networks, machine learning, deep learning, and genetic algorithms.

These techniques might promote a change in knowledge, mental processes, and culture.

The quality of teaching and learning is greatly impacted by the philosophical and pedagogical viewpoints that are typically implied by the usage of various classes of educational technology. Few studies explicitly look at the various roles of AI in education, how it relates to current theories of education and learning, and how much the use of AI technologies affects learning and instruction, even though pertinent work has reviewed AIEd categorizations, approaches, research issues, challenges, and future visions. Even though AI has the potential to revolutionize education, this is still the case.

References:

Artificial Intelligence in Education: The Three Paradigms

https://www.researchgate.net/