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Impact of Artificial Intelligence in Educational Sector

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Abstract:
Artificial Intelligence (AI) significantly transforming the education from personalized learning to administrative efficiency. In face of rapid advancements in AI powered technology, education sector is both consumer and an actor. In today's era, AI may provide greater support to educational sector. Emerging trends of AI can collaborate the educators and technological expert. The use of AI is to improve the teaching and learning and to support innovation throughout educational system. This paper outlines the potential impact of AI to enhance education, acknowledge the potential obstacles and formulate suggestions for future policy development.

Keywords: Artificial Intelligence (AI), Educational Sector, Administrative Efficiency, Teaching and Learning

Introduction:

Artificial Intelligence (AI) widely used in educational sector, it growing quickly and its use in education is expected to increase. The learning outcome has been impacted by computer based and machine based instructions in the recent years. It is important to understand how teachers and students are feeling about the impact of AI systems on their interactions. AI powered pedagogical design and instructional tools are helping teachers and students to achieve the intended learning outcomes in education. AI is changing education, making learning easier, more effective and inclusive for everyone. Recent studies have mapped the obstacles for introducing the AI in education including ICT hardware availability, data cost, language, internet reliability, basic skills etc. The digital age allows everyone to store and analyze the private data. Datafication is the process of turning information into data. In education, it helps to create personalized learning experiences but also raises the ethical concern[1].

Objectives:

1. To identify and discuss the comparative advantages of AI.
2. To understand the reason behind why AI has been introduced in educational sector?
3. To find opportunity and challenges in the field of education.
4. To recognize AI based education is healthy or not.

Literature Review:

In the UNESCO report, the author Pedro, F., Subosa, M., Rivas, A., & Valverde (2019) elaborated the key opportunities and challenges of artificial intelligence in education field. Authors defined the rules and policies of how AI is used to improve education efficiently and effectively[2]. Gocen (2020) highlighted

challenges of AI in case of data privacy, reduced human interaction and need for teacher training. Also, explained how AI offers insight to support education[3]. Kamalov (2023) focused balanced approach for integrating AI in education. Authors pointed benefits and challenges of AI in the field of education and suggested to adopt AI with proper rules and guidelines to ensure sustainable educational development[4]. Author Seo (2021) found that AI can improve online learning from personalizing lesson, giving quick feedback and helping in grading to instructors[5]. Ahmad (2023) recommended the good and bad effects of AI in education. They explained the use of AI make students less active in learning and they used AI tools unsafely without concerning privacy loss [6]. Fitria (2021) examined the AI tools for teaching and learning process and integration of AI in educational settings. Also, highlighted the education more effective and interactive with the help of AI tool [7]. Khurd Snehankita (2024)emphasized the need for strategic approaches to address the challenges of online learning in education which ensure to technologies translate into effective and inclusive educational experiences [8].

Applications of AI:

Artificial Intelligence (AI) used in the many industries like education, gaming, agricultural, cyber security and human resources etc. The following table shows different industries use AI in broad way.

Table: Applications of AI

Sr. No.	Field Name	Use
1	Marketing	Focused advertising, personalized recommendation, content creation, and chatbot etc.
2	Finance	Risk management, fraud detection and algorithmic trading etc.
3	Healthcare	Personalized medicine, diagnosis and treatment of disease, drug discovery etc.
4	Transportation and Manufacturing	Autonomous vehicle, traffic optimization, robotics, quality control and maintenance etc.

Perspectives of AI:

Artificial Intelligence gives us tremendous opportunity to create innovative content through the tools and technology. AI suggests the helpful resources to improve skills of educators and made easier to learn the complex things. The following criteria define how AI works from educators view.

1. From Student's point of View:

AI especially strong toolkit for expanding the adaptivity provided to the student. It supports students to learn with new emerging technologies and their related terms. AI powered platform customize the lessons, notes as per student's needs. It provides gamification, virtual and augmented reality, and flexible digital learning opportunities to students.

2. From Teacher's point of View:

Lot of things that AI technology that helps to teacher in planning, reflecting as well as enhancing their practice. With the help of different AI tools teachers are able to create their curriculum and contents more interactively to engage the student in classroom. AI made easier for teachers to monitoring the online assessment and evaluating results.

Challenges of AI:

While using AI, address ethical concern and developing quality in the field of education is big challenge. AI provides

smart tools for instant feedback, suggestions and answers for everything, so it making educators lazy to think critically. Personal privacy and security issues arise while the use of AI in education. It also affects teacher student healthy interaction.

Conclusion:

AI has bought many helpful changes to education. It allows students to learn in their own time and way. AI is reshaping the educational experience in both positive and challenging way. The main impact of AI in educational sector is to revolutionizing education by increasing its efficiency, accessibility and personalization. Additionally, the AI will contribute to sustainable learning outcome and career growth in the field of education in future.

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