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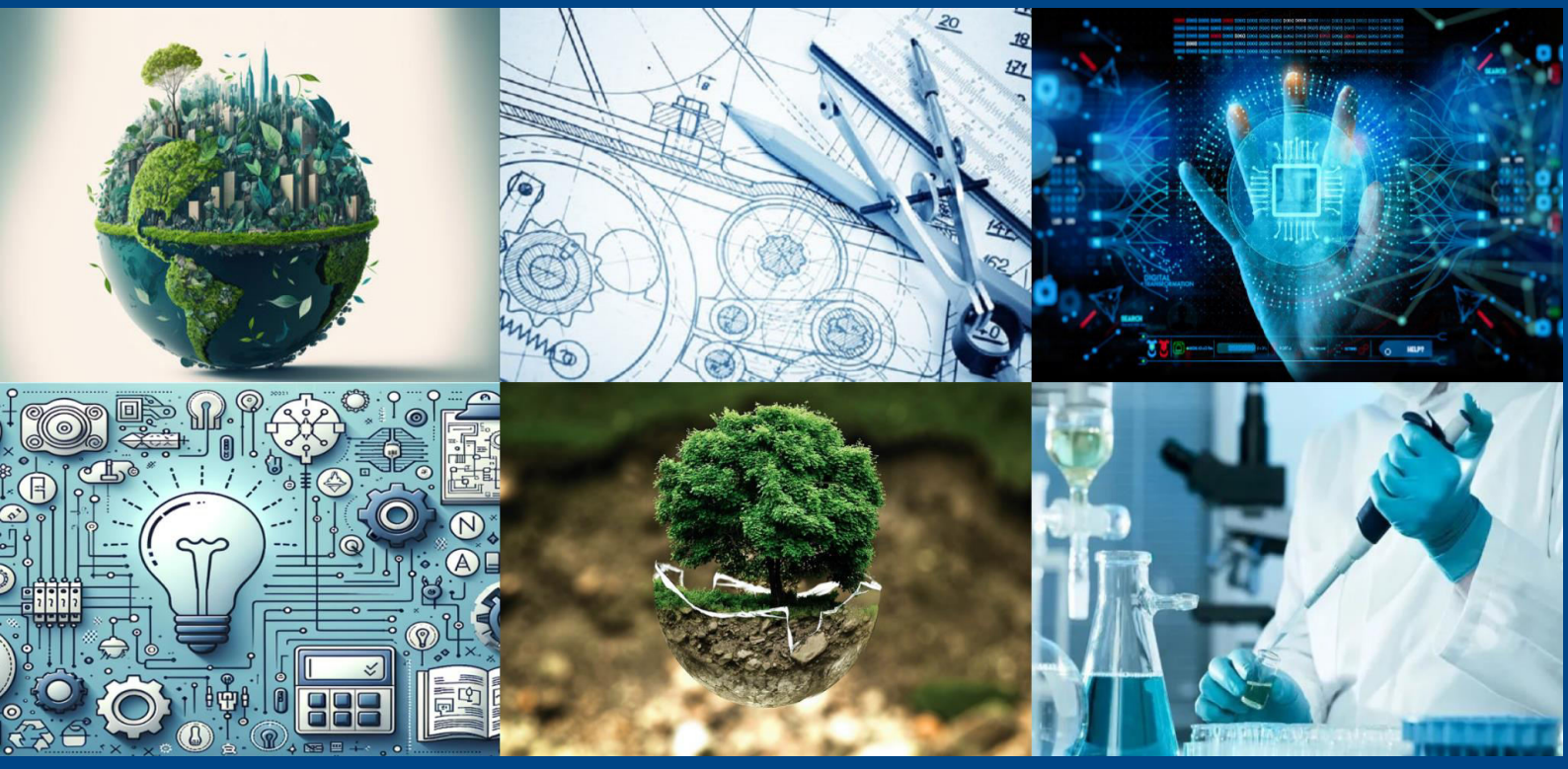

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AI-Ethical Concerns &Trend's in Personalized Learning

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ABSTRACT: The effectiveness of technology-based personalized learning (PL) solutions in improving learning outcomes is shown in this paper, which discusses PL as an alternative to traditional education. It includes the ideas of self-determination theory to increase learning outcomes and encourage students. The study discusses teachers' experiences with AI-powered personalized learning, focusing on both the possible advantages and the implementation and moral challenges. In addition to talking about how AI might improve e-learning courses and the rise of virtual tutors driven by AI, it also makes ethical issues like algorithmic biases and data privacy. The study clarifies how important it is to understand how AI can help personalize learning and promotes a well-rounded strategy that matches traditional methods of instruction rather than replaces them.

KEYWORDS: Personalized learning, Artificial intelligence, student, Academic performance, Management education.

I. INTRODUCTION

The goal of India's Viksit Bharat 2047 education vision is to build a high-quality, inclusive system for skill development. Over 1.5 million schools, 8.5 million teachers, and 260 million students attend classes in schools each year. Also, 40 million students enroll in 42,000 colleges and 1000 universities across the nation. But the system struggles by static testing, old teaching strategies, and set courses of study, which causes a gap between education and trendy job skills. By changing education from standardized to personalized learning, artificial intelligence is changing the context and making it more relevant to the demands of today's world. With applications in education, self-driving cars, and medical diagnosis, artificial intelligence (AI) is a rapidly growing field that focuses on building robots that mimic human thought and behaviour. Self-driving cars, medical diagnosis, and teaching are just a few of the many uses for these robots. Any industry that uses AI-powered tools and applications to raise the standard of services provided to students and teachers Artificial intelligence (AI) tools, such as Bing and ChatGPT, have been dubbed "objects people can think with," especially when it comes to teaching and learning, where students may improve their ability to think deeply and carefully, enhance creativity, improve their problem- solving skills, and understand concepts.

How Does AI Work?

AI replicates intelligent behaviour through computer programs. It means that, like people, these programs are capable of problem-solving, experience-based learning, and situational adaptation. Consider it similar to educating a child. Artificial intelligence (AI) systems learn from data and get better at tasks over time, much like a child is.

AI applications

Self-driving cars, medical diagnosis, and education are just a few of the fields that use AI. AI tools in education contribute to better instruction and learning outcomes. AI, for example, can assist educators identify their students' strengths and areas for improvement. This is comparable to how a coach analyses a player's performance in order to assist them in growing better.

AI Tools in Education

AI-powered tools for learning include programs like Bing and ChatGPT. These tools support students' critical thinking, creativity, and problem-solving skills. Consider hiring a knowledgeable tutor who can respond to your inquiries and offer suggestions for your assignments. answers and provide teachers insights into how well students are learning. For instance, this is what AI tools can do for students.

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Learner centred Education AI supports learner centred learning, which highlights each student's particular requirements and abilities. Students can learn at their own pace and in their own way with this method. For example, an AI tool can offer resources and extra practice that's specific to the needs of a student who struggles with math. Improving Evaluation and Input AI tools can improve educational assessment and testing. They are able to evaluate student if a student submits an essay, an AI system can evaluate it and provide personalized feedback, helping the student understand what they did well and what they can improve.

Benefits for Teachers

Teachers can also benefit from these AI resources by observing how effective their lessons are. The teacher can modify their teaching strategies if a lot of students find a given subject difficult. This is comparable to a chef deciding to add more seasoning to a bland dish after tasting it. Based on AI feedback, educators can improve their lessons.

Covid – 19 Impact on the Market

The move to online learning during the pandemic caused major changes in the Indian AI in education market. In order to ensure educational continuity in a remote setting, AI-powered solutions became essential for analytics, assessment, and personalized learning experiences. India displays quick acceptance and increasing interest in using AI to raise the standard and availability of education. The nation's focus comes from its status as a global center for technology and its need to education

The Ethics of AI in General

Globally, the rapid growth of artificial intelligence (AI) has opened up a wide range of opportunities, from improving healthcare evaluation to promoting human connections on social media and increasing productivity through automated tasks. But there are also serious ethical questions raised by these quick changes. These result from AI systems' capacity to promote opinions, contribute to climate change, compromise human rights, and more. These AI-related risks have already started to contribute to already-existing inequality, causing additional damage to already excluded communities.

- Privacy and Data Security: In order to customize learning, AI systems frequently process huge amounts of student data. Protecting this data from misuse and illegal access is essential, as is making sure that data security regulations are followed. Teachers and students should be aware of the methods of decision-making used by AI algorithms. Transparent AI increases trust and allows users to challenge or ask about AI-generated results as needed.
- Bias and Fairness: artificial intelligence systems that are trained on biased data might confirm assumptions, which may result in specific student populations receiving treatment differently. It's essential to continuously check AI tools for biases and work toward fair results.
- Accountability: It's critical for distributing blame for decisions made by AI. Who is responsible for AI's actions should be clearly defined in guidelines, particularly when those actions affect the education or welfare of students.
- Explainability and Transparency: Although AI can support educational processes, human judgment is still essential. Making sure teachers supervise AI applications helps maintain the human element in instruction and avoids becoming overly dependent on technology.

II. AI ETHICS

Steps that can be taken to establish AI Ethics (Google)

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Objectives

AI is used in higher education in a number of ways, such as chatbots for student support, plagiarism detection, and exam security. Additionally, it facilitates research, links campuses, tracks student progress, enhances online learning, and transcribes lectures. These different apps facilitate work and enhance everyone's educational experience.

- The study intends to examine teachers' experiences with personalized learning programs driven by AI.
- It looks at AI's potential and difficulties in education.
- The study highlights the importance that ethical frameworks and professional development are to the effective integration of AI.
- To improve student motivation, engagement, and academic performance, the study is going to explore how self-determination theory (SDT) principles can be implemented in management education.
- It looks for to determine the advantages and difficulties of integrating AI.

III. REVIEW & LITERATURE

A Research paper titled "AI-enabled personalized learning empowering management students for improving engagement and academic performance"(2024). The Study aims to explore the integration of Self- determination theory principles into management education The study aims to explore how AI-enabled personalized learning (AIPL) functions within management education, considering a blend of technology, psychology and education. In this context, AI represents the technological component, forming the basis for Personalized Learning systems. The study also examines students' engagement and academic performance (AP) through an educational perspective. Investigating how customized educational approaches can improve student outcomes and create more effective learning environments. The main aims to uncover dimension enhance our understanding of AI driven personalized learning in management education [1].

A study entitled "AI-powered personalized learning" A paradigm shift in standard methods of instruction has been caused by artificial intelligence (AI), which has emerged as a driving force for personalizing the learning experience. modifying educational experiences according to each learner's particular requirements, learning preferences, and pace is the basic meaning of personalized learning. The growing number of digital classrooms, e-learning platforms, and massive online courses has made educators and technologists aware of the disadvantages of a "one-size-fits-all" approach. As a result, researchers are looking into how AI might improve personalization. In addition, personalized learning is being made easier by developments in AI-powered chatbots and virtual assistants [2].

"The Role of Artificial Intelligence in Personalized Learning" is the title of the research paper. Artificial intelligence (AI) has attracted a lot of attention in recent years because of its potential to fundamentally change traditional teaching and learning methods. In particular when applied to personalized learning, AI is promise for achieving each student's unique needs and enhancing engagement and academic performance. This thesis examines the ways in which artificial intelligence impacts student performance and supports personalized learning. The ability of artificial intelligence (AI)-enabled personalized learning to significantly improve students' academic achievement has gained increasing popularity in the field of education. [3].

A study entitled "Analysis of Artificial Intelligence's Effect on Student Learning Outcomes" The impacts of artificial intelligence go beyond improved efficiency. For students who have different learning needs, solutions powered by AI can help close the gap. Everyone can access and become involved with educational content thanks to tools like text-to-speech or language translation software, which may create a more inclusive learning environment. In particular, AI has the potential to stimulate creativity and innovation in the classroom. It can enable teachers to create innovative teaching strategies and educational opportunities that interest learners and motivate them to continue lifelong learning [4].

A study with the title "AI and personalized learning: bridging the gap with modern educational goals" The objective of personalized learning is to offer an alternative to the one-size-fits-all approach to instruction. Technology-based personalized learning solutions have shown an amazing capacity to improve learning outcomes. The goals of modern education and the technological approach to personalized learning diverge, based on our analysis. We identify areas in which AI- powered personalized learning solutions might include crucial components of concurrent learning. We examine the possibilities of generative AI, like ChatGPT, that combines artificial intelligence with a collaborative, instructor-led method of customized instruction [5].

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IV. METHODOLOGY

AI-Powered Accessibility Solutions: Real- World Use Cases and Benefits

AI has many applications in education, changing how teachers teach, how students learn, and how educational institutions work. among the well-known uses of AI in education are :

1. Intelligent tutoring programs

AI-powered coaching services use complex algorithms to provide students with immediate, customized input. The AI examines student responses as they interact with learning materials, indicates problem areas, and adjusts explanations to improve knowledge. This tailored approach adjusts the learning pace to fill in information gaps. These systems enable students to better understand difficult concepts by providing prompt support and meeting a variety of learning tastes. Students' confidence and general academic performance are boosted by the dynamic learning environment generated by their continual interactions with AI. Automated Grading and Assessment: AI simplifies the grading process by assessing student work and creating timely, accurate assessments. Teachers' workload decreases, enabling them to concentrate on individualized instruction. Patterns of student performance make it simpler to identify those who are struggling and offer them specialized assistance. On one hand, AI's productivity makes sure prompt feedback, increasing the learning cycle. Automated assessment and grading systems enhance instruction quality, promote just evaluation, and encourage productive relationships between students and teachers.

2. Chatbots and Virtual Assistant:

AI-powered chatbots and virtual assistants are crucial to improving the educational experiences of students. By reacted to requests, supporting students with their homework, and offering sensitive feedback these intelligent systems offer immediate assistance. These resources are available around-the-clock, so they can help students with their needs whenever they come up, even outside of scheduled class times. Students who receive individualized support are more inclined to succeed academically as it encourages self-directed learning and gives them the confidence to take part with the course material.

3. Customized Education:

In a traditional educational setting, pupils have a variety of abilities and learning preferences. The traditional method is frequently required to better allow these variations. This is in which via AI in distance learning starts to pay off. AI can be used by educational platforms to provide customized educational opportunities for every student. Additionally, the system may adjust to the various learning styles of each student using technologies like machine learning, thereby minimizing the cognitive load on them.

4. Task Automation:

AI enhances virtual classrooms through allowing task automation in education. In addition to giving individualized instruction, AI manages helpful tasks like grading exams, arranging research papers, managing reports, evaluating homework, and even making notes and presentations. This integration allows edtech companies to improve their operations and improve daily productivity. By automating repetitive tasks, artificial intelligence (AI) promotes an environment that supports knowledge formation and educational efficiency.

5. Language Learning:

By offering immediate, real-time feedback on vocabulary, grammar, and pronunciation, artificial intelligence improves language learning. This interactive activity increases students' language skills and encourages a more productive learning environment as they receive immediate advice and corrections. AI replicates real-world conversational situations, which makes language learning interacting and practical. It adjusts to each student's particular learning preferences to provide tailored support. All things considered, AI changes language learning by making it more engaging and accessible for learners of all abilities.

The Impact of Ai on Personalized Learning In Education

- By customizing learning to each student's needs and preferences, artificial intelligence (AI) in education improves student performance compared to traditional methods.
- This tailored approach enhances students' motivation, engagement, and understanding of the material.
- Learning outcomes are improved by AI tools that assist teachers to recognize students' areas of strength and weakness.

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- Limitations
- Teachers frequently control to educational problems, limited resources, and technological limitations when implementing AI-driven personalized learning.
- The study highlights how ethical standards are essential for solving implementation problems and optimizing AI's benefits.
- The study only examined the benefits of AI-enabled personalized learning, excluding any possible downsides or challenges.
- The study highlights the difference between PL solutions driven by AI and the more

V. CONCLUSIONS

There are different opinions among teachers regarding AI; some are careful, while others are in support of it. By causing customized suggestions based on student data, artificial intelligence (AI) in education enhances personalized learning. Challenges include training, technology access, and data privacy issues, as well as ethical concerns about data privacy and a possible over-reliance on AI, which might decrease the human element of teaching. All things considered, AI holds potential for customized education; however, there are still implementation challenges that must be overcome.

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