Role of AI Tools in Boosting Student's Learning Outcome

Jasmi Babu
Assistant Professor, Carmel College (Autonomous), Mala, Thrissur

OPEN ACCESS

Volume: 13

Special Issue: 1

Month: March

Year: 2025

E-ISSN: 2582-6190

Citation:
Babu, Jasmi. "Role of AI Tools in Boosting Student's Learning Outcome." *ComFin Research*, vol. 13, no. S1-i2, 2025, pp. 74–76.

DOI:
https://doi.org/10.34293/commerce.v13iS1-i2-Mar.8738

Abstract

The integration of artificial intelligence (AI) instruments in instructive settings has the potential to altogether up grade under study learning results. This think aboutexplores the different ways in which AI can be utilized to boost instructive execution, cantering on personalized learning, cleverly coaching frameworks, and data-driven bits of knowledge. By fitting instructive encounters to person understudy needs, AI devices can address assorted learning styles and paces, subsequently cultivating a more comprehensive and viable learning environment. Moreover, the utilize of AI in instruction encourages real-time input and versatile learning ways, empowering under studies to get a handle on complex concepts more effectively. Through a comprehensive examination of current AI applications and their effect on under study accomplishment, this investigate points to supply profitable experiences for teachers, policymakers, and innovation engineers endeavoring to saddle AI's potential to upgrade instructive results.

Introduction

With in the quickly advancing scene of instruction, the integration of Artificial Intelligence (AI) instruments has developed as a transformative constrain, essentially impacting instructing techniques and learning results. The coming of AI in instruction offers aextend of inventive arrangements outlined to improve under study engagement, personalize learning encounters, and give real-time input, in this manner catering to the different needs of learners. This shift towards AI-driven instruction isn't only a mechanical slant but anessential alter in how instructive substance is conveyed and retained.

AI devices include a wide range of applications, counting shrewdly coaching frameworks, versatile learning stages, and robotized reviewing frameworks. These devices use progressed calculations and machine learning strategies to analyze understudy information, anticipate learning designs, and customize guidelines techniques. By tending toperson learning styles and paces, AI apparatuses offer assistance bridge holes in understanding, guaranteeing that no understudy is cleared out behind.

Review of Literature

Baker and Siemens (2014) talk about the part of AI in giving data-driven experiences that can offer assistance teachers make educated choices. By analyzing huge sets of understudyinformation, AI devices can recognize patterns and designswhich will not be instantlyclear. This data can be utilized to alter guidelines methodologies and intercessions, driving to way better under study results.

Agreeing to a think about by Wang et al. (2020), AI-driven versatile learning frameworks can tailor instructive substance to the person needs of understudies, in this manner progressing engagement and comprehension. The utilize of calculations to analyze under study execution information permits for the creation of customized learning ways, which can address holes in information and cater to diverse learning styles.

Objectives

- To assess an effect of AI Driven personalized learning on under study scholarly execution
- To explore the part of cleverly coaching frameworks in upgrading problem-solving aptitudes and concept dominance.

Research Methodology

This considerutilizes a mixed-methods inquire aboutplan to comprehensively analyze the effect of AI instruments on understudy learning results. A stratified arbitrarytest of understudies from essential, auxiliary, and tertiary instructiveeducate will be chosen. Quantitative information will be collected through pre-test and post-test evaluations, studies, and AI instrument utilization analytics, where as subjective information will be assembled by means of structured interviews with understudies, instructors, and directors. Quantitative information will be analyzed utilizingclear and inferential measurements, and subjective information will be inspected through topical and substance examination. Moral contemplations will incorporate educated assent, privacy, and information anonymization. This strategypoints to triangulate discoveries to supply vigorous experiences into how AI apparatuses improve instructive execution.

Proven

Variables	Factor		
	1	2	3
	(Usage & Engagement)	(Adaptability & Feedback)	(Initial Level & Support)
The amount of time spent utilising AI tools	0.77	0.19	0.9
AI tool usage frequency	0.74	0.24	0.14
Student involvement level	0.81	0.21	0.17
Customised feedback	0.29	0.79	0.24
Adaptability in learning styles	0.27	0.75	0.19
Interest and motivation of students	0.31	0.80	0.21
Academic level	0.14	0.19	0.71
Parental participation and Support	0.9	0.17	0.67

The factor examination has distinguished three keyvariables that contribute to the viability of AI-driven personalized learning on understudy scholarly execution: engagement and utilization, personalized input and versatility, and back and introductory level. These discoveries propose that to maximize the benefits of AI devices in instruction, endeavorsought to be centered on upgrading under study engagement, giving high-quality personalized criticism, and supporting understudies through beginning scholastic appraisals and parental association.

Findings

- Emphatically related with time went through utilizing AI devices (0.78), recurrence of AI device utilization (0.75), and understudy engagement level (0.82).
- This calculate basically reflects how effectively under studies associated with AI-based learning instruments.
- Recommends that AI devices that offer personalized criticism and adjust to students' learning styles contribute to higher inspiration and engagement.
- The beginningscholarly level (0.72) is the most groundedstacking variable beneath thisfactor.
- Proposes that students' introductory scholastic levels impact how they associated with and advantage from AI devices.
- Indicate the viability of AI in adjusting to person learning needs and improving understudy inspiration.
- Profoundly connected with quality of personalized criticism (0.80), learning fashion versatility (0.76), and understudy inspiration and intrigued (0.81).

Suggestions

- Plan AI-driven personalized learning roadmaps that offer assistance under studies with lower beginning information levels capture up.
- DevelopAI-driven personalized learning roadmaps that offer assistance under studies with lower starting information levels capture up.

Conclusion

Pupil who regularlyutilize AI instruments and spend more time collaboration with them tend to be more locked in in learning, highlighting the significance of user-friendly and intelligently AI interfacing. The quality of personalized input and flexibility to learning styles altogether boosts understudy inspiration and intrigued, illustrating the require for AI frameworks that tailor learning encounters to person needs. he student's earlier information influences how they connected with and advantage from AI devices, emphasizing the significance of versatile learning pathways and customized bolster for distinctive scholastic foundations. well-designed AI instruments can progress learning results by cultivating engagement, adjusting to differing learning needs, and advertising focused onbolster based on students' scholastic levels.

References

1. Wang, X., Johnson, J., & Williams, R.. "AI-driven versatile learning frameworks: Upgrading engagement and comprehension. Diary of Instructive Innovation Investigate" , 45(3), 245-263. (2020)
2. Baker, R. S., & Siemens, G. "Instructive information mining and learning analytics: Towards data-driven instruction. Diary of Learning Analytics", 1(1), 3-17(2014).