

Transforming Teaching: Harnessing AI-powered Engagement Tools for Gen-Z Learners

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Abstract

In education, classroom engagement tools have become essential for teachers to connect with Gen-Z students. In this digital era dominated by Artificial Intelligence (AI), classroom engagement tools have revolutionized education by transforming lessons into vibrant, participatory experiences that foster attention, motivation, and deeper understanding. This paper highlights some of the initiatives taken by government institutes to assist teachers in using AI for teaching and showcase the outcomes of student learning after the author used some of the classroom engagement tools during the course. It was found that most of the students have made substantial improvements in their academics after going through the AI-enabled classroom engagement tools.

Keywords—classroom engagement tools; artificial intelligence; Gen-Z;

JETLP Category—Classroom Engagement tools

Introduction

Classroom engagement tools play a pivotal role in modern education by turning passive lessons into interactive experiences, especially for Gen-Z students who are digital natives. These tools leverage technology to increase participation, motivation, and understanding by offering collaboration, real-time feedback, gamification, and personalized learning pathways (Wang, et al., 2024). The blend of traditional and tech-based learning offers a sense of community, accessibility, and support, further promoting engagement and self-regulation. Educational analytics enabled by AI offer educators' critical insights into student progress, enabling proactive intervention and support (Silva, Godwin, & Jayangara, 2024). Teaching-learning activities in Higher education must be performed in such an environment where content is changing continuously (Datta, Sharma, Jha, & Mandke, 2025). Several educational theories that focus on implementing education according to a learner's needs are central to personalized learning. Some of the key theories found to have been instrumental in contributing to this shift include constructivism and connectivism (Sakri, Kori, Joshi, Nayak, & Marigoudar, 2025). Numerous applications of AI in classroom engagement have emerged. Table 1 shows a few of them.

Table 1: Some examples of Classroom engagement tools

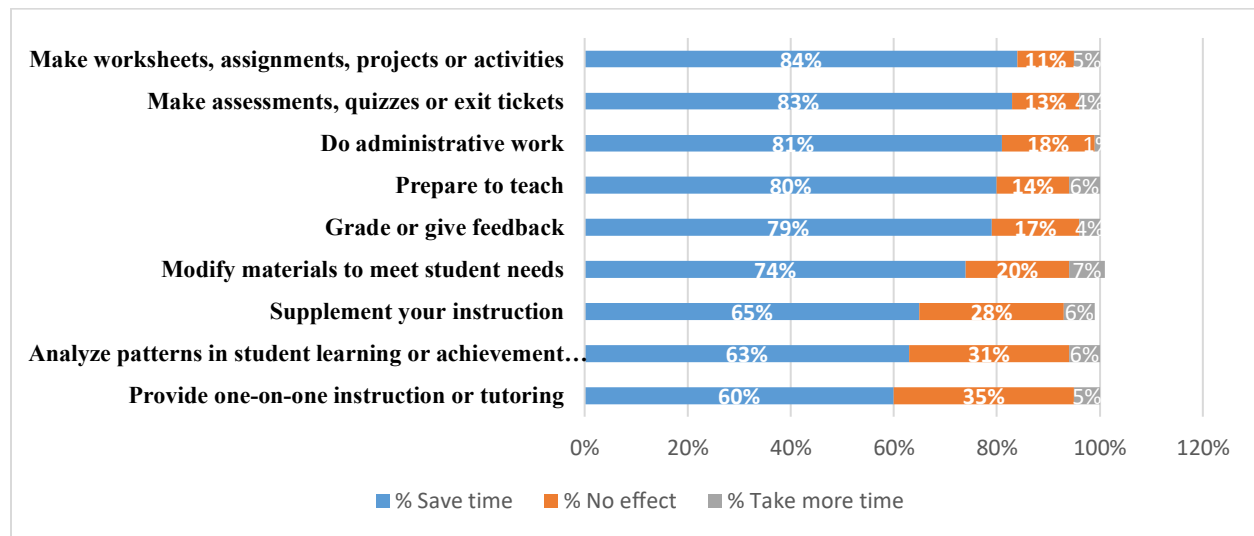
Classroom Engagement Tool	Features
Khanmigo	Engages students in personalized, safe dialogue to enhance learning
Edcafe ai	Enables direct student interaction with AI-generated content anywhere, anytime
Diffit	Supports comprehensive questions, vocabulary lists and graphic organizers
Snorkl	Supports revision and deeper reflection with personalized coaching
Deck.toys	Gamifies lessons through interactive learning maps and adaptive pathways
MagicSchool.ai	Streamline instructional material development with AI support
Eduaide.ai	Assist teachers with creating lesson plans, educational games, graphic organizers and assessments
Curipid	Supports real-time student participation

Challenges and opportunities

The expectations from the new generation have changed which wants guidance, mentoring, coaching and handholding (Bhagwat, 2024). It is essential to prepare students for the challenges and opportunities that AI provides as it continues to influence society. Several countries and educational institutions have made AI-related studies a requirement in their curriculum (Sanusi, et al., 2023).

A nationwide survey by the Center for Teacher Accreditation (CENTA) reveals that 70% Indian teachers use AI tools in classrooms but may still lack a clear understanding of the technology (<https://centa.org/centa-ai-teacher-survey>, n.d.). At a global scale, 60% of teachers have incorporated AI into their regular teaching routines (Seril, 2025). The most common applications include research and content gathering, creating lesson plans, summarizing information and generating classroom materials. Table 2 is a summary of the 2025 Gallup survey conducted in the United States. Around 2,232 U.S. public school teachers participated in the survey and nearly two-thirds utilized AI and saved almost 6 hours of work per week.

Table 2: Percentage of teachers who say AI saves time on various work tasks



The Indian government has launched several initiatives to make teachers AI-ready by combining policy, funding, training, curriculum integration and infrastructure development. The Skilling for AI Readiness (SOAR) program launched in July 2025 in India represents a strategic initiative by

the Ministry of Skill Development and Entrepreneurship (MSDE) to integrate AI competencies into India’s educational framework. Beginning with the 2026-2027 academic year, India’s Ministry of Education has announced AI and Computational Thinking mandatory subjects in schools from Class 3 onwards. This move positions India among a select group of nations prioritizing AI curricula in schools at the foundational level.

Case Study

AI -aided education includes intelligent education, innovative virtual learning, and data analysis and prediction. Intelligent education systems provide timely and personalized instruction and feedback for both instructors and learners (Chen, Chen, & Lin, 2020).

Survey on usage of AI Tools by students

The author conducted a survey on the usage of AI-enabled platforms during October 2025. About 323 undergraduates participated in the survey. As part of the survey, students were asked to mention frequently used AI Assistance tools for their learning. The summary of the survey is shown in Fig 1. Clearly ChatGPT is the popular tool frequently used by students for their learning.

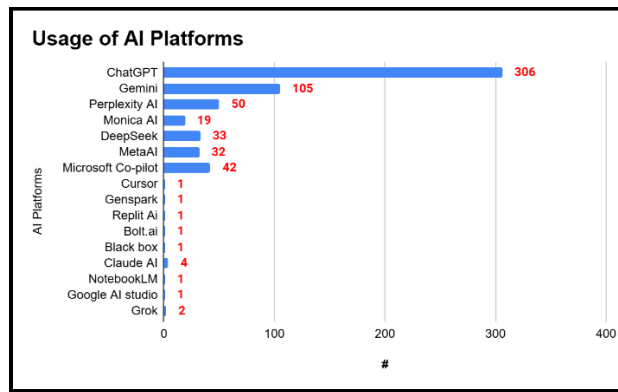


Figure 1: Summary of the survey

Curipod – Classroom Engagement Tool

The author used a free academic limited version of Curipod, an interactive classroom engagement tool. A static lecture note was uploaded into the tool to generate a lesson with four interactive activities. 37 students out of class strength of 48 participated in an hour-long session. At the end of the session, the tool gave a report on each student’s involvement in the session. Figure 2 shows

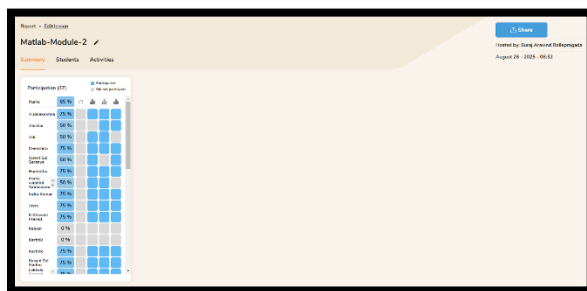


Figure3: Summary of the student participation

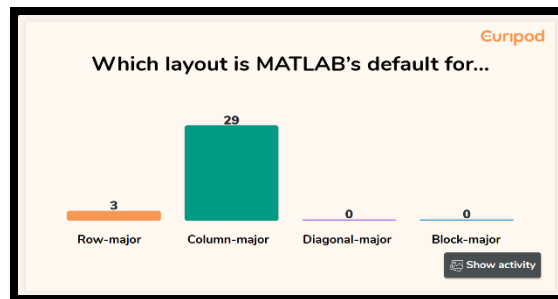


Figure 2: Poll Question response

the response of a poll question during the session. On the spot feedback gave good scope for discussion. Figure 3 shows the summary of the student participation at the end of the session. A few sessions planned in this manner gave encouraging outcome represented in Figure 4 and 5. Comparison is drawn between two Quizzes 1 and 2. Quiz-1 was conducted after taking the session in a traditional way and Quiz-2 was conducted after taking the session using interactive classroom engagement tool. Figure 4 shows mode of marks scored by the students. Students scored well in Quiz-2 than Quiz 1. The maximum score (4), minimum score (3), maximum time spent on the quizzes (20 minutes) remained the same. There was significant improvement for the metrics – Average score, average time spend (minutes) and minimum time spend (minutes) for Quiz-2.

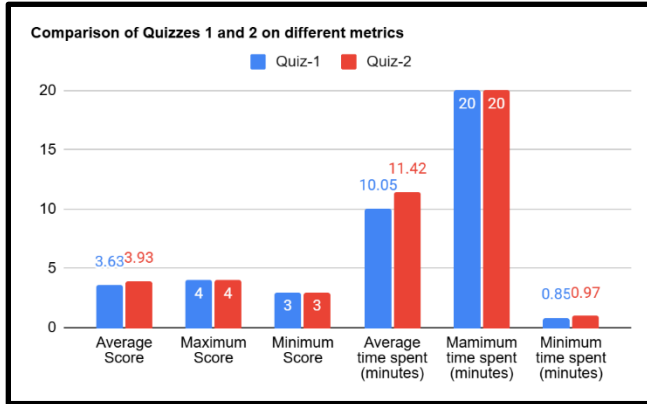


Figure 3: Assessment Outcome

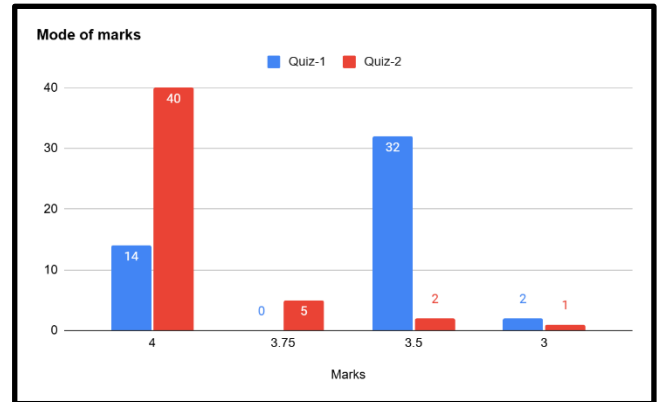


Figure 2: Mode of marks

Conclusion

According to reports, AI education market is projected to hit \$112.30 billion by 2034. Key trends include increased personalization, more sophisticated assessment tools and better integration with existing educational systems. It is high time for teachers to equip themselves with the usage of AI in their teaching.

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