

Edu-AI

*Empowering Learning, Not
Replacing It*

A guided AI platform enhancing
conceptual understanding through
course-specific interaction.

TEAM 69

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EXECUTIVE SUMMARY

The proliferation of AI tools in education has created both opportunities and challenges. While systems such as ChatGPT have revolutionised access to information, they have also led to over-reliance, ethical concerns, and reduced learning engagement. Edu-AI is designed to address these issues by offering a structured, guided learning platform that integrates seamlessly into existing Learning Management Systems (LMS).

Edu-AI provides a structured, guided learning environment where students interact with AI to deepen their comprehension. It empowers educators to customise AI responses to align with course objectives and enhances student engagement through non-directive, interactive AI tools.

By combining technical innovation, secure integration, and scalability, Edu-AI redefines the educational experience for students and educators alike. With its potential to maximise educational outcomes, Edu-AI is poised to become a game-changer in the Ed-Tech market.

VALUE PROPOSITION

Edu-AI redefines the educational experience by bridging the gap between technology and pedagogy, ensuring meaningful learning for students while empowering educators with unparalleled tools.

- **Transformative Student Learning:** Edu-AI guides students through complex concepts, fostering deep comprehension and critical thinking. Unlike generic AI tools that provide direct answers - often not the correct answers - Edu-AI encourages active engagement and skill development by offering step-by-step explanations, personalised study paths, and interactive practice exercises tailored to individual needs.
- **Empowerment for Educators:** Professors and teaching assistants gain full control over AI interactions, allowing them to design responses that align with specific course objectives and referring to uploaded course material.

Edu-AI is not just a tool but a partner in education, enhancing learning experiences, and paving the way for ethical and effective AI adoption in academia.

STAKEHOLDERS

Primary Stakeholders:

- **Students:** Seeking tools that enhance their understanding and provide tailored support for complex concepts.
- **Educators:** Professors, teaching assistants, and course coordinators looking for innovative ways to manage large classes and maximise learning opportunities.

Secondary Stakeholders:

- **Education Institutions:** Universities and colleges have a clear need to ensure the responsible use of artificial intelligence, while ensuring they remain competitive.
- **LMS Developers:** Companies such as Canvas or Blackboard that could integrate Edu-AI's capabilities to enrich their platforms.

MARKET RESEARCH

To better understand the landscape of AI usage in education and the needs of our target audience, we conducted a survey of fellow students (Appendix A). Key findings from the survey provide compelling evidence for the demand for a guided AI learning platform like Edu-AI:

Widespread Use of AI Tools in Education:

- 94.1% of respondents reported using ChatGPT or similar tools for classes and study help.
- However, only 64.7% use such tools to walk through problems or generate ideas without directly seeking answers, highlighting a gap in guided, non-directive AI solutions.

Interest in Tailored Educational AI:

- 82.4% of respondents expressed willingness to use a tailored chatbot that provides explanations and directs them to class-specific materials rather than giving answers outright. This confirms strong demand for a platform like Edu-AI, which emphasises guided learning.

Current Challenges with AI Tools:

- 70.6% of respondents admitted to using ChatGPT to purely get answers or complete their work, illustrating how existing tools encourage dependency rather than fostering learning.
- Respondents were divided on whether ChatGPT had a significant impact on their class performance, with 58.8% noting a positive effect but 23.5% citing negative outcomes, likely due to misuse.

Limited Utilisation of Office Hours:

- Over half of the respondents (52.9%) only attend office hours when needed, suggesting a preference for on-demand academic support, which Edu-AI can provide efficiently.

Desired Outcomes from Assistance:

- Respondents primarily aim for conceptual help (52.9%) or a nudge in the right direction (29.4%) when seeking academic support. This aligns directly with Edu-AI's goal of enhancing problem-solving skills through guided interactions rather than direct solutions.

The survey data highlights significant gaps in the current academic support ecosystem that Edu-AI is uniquely positioned to address:

- **Scalability and Accessibility:** The high adoption of AI tools for educational purposes demonstrates a strong foundation for growth. Edu-AI's 24/7 accessibility and integration into existing LMS platforms make it an ideal solution for students who seek immediate, tailored assistance.
- **Ethical AI Integration:** The willingness to adopt a non-directive AI tool suggests a demand for platforms that prioritise learning over shortcut solutions, aligning perfectly with Edu-AI's mission.
- **Reducing Dependency on TAs:** By automating the type of support typically provided by TAs, Edu-AI meets a growing need for scalable academic support without sacrificing quality.

CUSTOMER SEGMENT

Edu-AI serves two primary customer segments: students and educators. For students, particularly those in large classes or studying complex subjects, Edu-AI provides an essential bridge to better understanding. These learners often lack the time or confidence to attend office hours and struggle to access meaningful support from generic AI tools or overburdened teaching assistants. Edu-AI offers a solution tailored to their needs, guiding them through problems, fostering critical thinking, and reducing dependency on direct answers. By addressing these pain points, Edu-AI empowers students to engage more deeply with their coursework and achieve better outcomes.

Educators, including professors and teaching assistants, represent the other core audience. Instructors managing large classes often face repetitive tasks such as grading, providing feedback, and addressing common questions. Edu-AI alleviates these burdens by automating routine processes and delivering scalable support, freeing educators to focus on personalised and high-value interactions with their students.

MARKET SIZE AND GROWTH

The education technology (ed-tech) sector is one of the fastest-growing markets globally, and the subset focused on AI-powered learning platforms is projected to be a major driver of this growth in the coming decade. In 2024, the global ed-tech market was valued at approximately \$163.49 billion and is projected to grow at a compound annual growth rate (CAGR) of 13.3% in the next five years, according to Grand View Research. This rapid expansion is fuelled by the widespread digitisation of educational institutions, the normalisation of hybrid and remote learning modalities, and the increasing integration of AI tools into both administrative and instructional workflows. Edu-AI is uniquely positioned to benefit from these trends, offering a pedagogically aligned, AI-powered solution that fits directly into institutional digital ecosystems.

A particularly significant subsegment within this broader market is the application of artificial intelligence in education. The global AI in education market was valued at \$5.88 billion in 2024 and is expected to grow at an exceptional CAGR of 31.2%, reaching over \$30 billion by 2030. This surge reflects the growing adoption of AI-driven tutoring systems, intelligent content delivery, and personalised learning platforms. Institutions are increasingly seeking AI solutions that enhance educational outcomes while maintaining academic integrity. In contrast to generic AI tools that often enable shortcut-seeking behaviour, Edu-AI's guided, non-directive approach offers institutions a path to integrate AI responsibly and effectively into their curricula.

In terms of serviceable addressable market (SAM), the United States alone hosts over 4,000 degree-granting higher education institutions, with more than 19 million enrolled students. Most of these institutions utilise Learning Management Systems (LMS) such as Canvas, Blackboard, or Moodle, which serve as natural integration points for Edu-AI. On average, institutions spend between \$100 and \$400 per student annually on digital education tools and services, indicating a SAM worth billions in the U.S. market alone for scalable, AI-enhanced academic platforms.

COMPETITION

Edu-AI operates in the competitive ed-tech landscape, where several tools, including ChatGPT and Learning Management Systems (LMS) like Canvas, dominate. However, these tools have significant gaps that Edu-AI is uniquely positioned to address.

Generic AI tools like ChatGPT are widely used for academic support, as evidenced by our survey showing that 94.1% of students use such tools for coursework. However, these tools primarily focus on providing direct answers, which fosters dependency rather than promoting deeper understanding. Moreover, they lack the ability to integrate with course-specific materials or align with educators' objectives. Edu-AI distinguishes itself by offering guided learning, where students are walked through problem-solving processes without receiving direct answers. This approach not only enhances comprehension but also supports long-term skill development.

Traditional LMS tools, such as OHQ and Canvas, offer functionalities like content hosting, assignment management, and basic support. However, these platforms are limited in their ability to provide personalised, interactive academic assistance. LMS tools do not feature advanced AI-driven guided learning or customisable educator controls, leaving a critical gap in their offerings. Edu-AI fills this void by seamlessly integrating into these systems, enabling both educators and students to leverage its AI-powered capabilities without disrupting existing workflows.

Additionally, real-life teaching assistants (TAs) represent another form of competition. While TAs offer personalised and contextual support, their availability is limited, especially in large classes or institutions with constrained resources. Edu-AI complements and, in some cases, replaces the need for TAs by providing scalable, 24/7 academic assistance. This not only reduces institutional costs but also ensures consistent and equitable support for all students.

COST AND REVENUE MODEL

Edu-AI's primary expenses will include development, infrastructure, and operational support:

- **Development Costs:**
 - Initial platform development (frontend/backend, AI integration, LMS compatibility): \$200,000–\$300,000.
 - Feature enhancements (professor dashboard, problem generator, analytics): \$50,000–\$100,000 annually for ongoing improvements.
 - Small team of developers and product designers over the first year of launch.
- **Infrastructure Costs:**
 - Cloud hosting, API usage, and data storage (using platforms like Supabase, ChromaDB, and OpenAI): \$4,000–\$7,000 per month, scaling with usage.
 - Total infrastructure estimated at \$60,000–\$80,000 annually to support thousands of concurrent users.
 - Includes FERPA-compliant security and reliability systems for university deployment.

- Operational Costs:
 - Customer support, onboarding, and marketing staff: \$150,000–\$250,000 annually.
 - Marketing campaigns targeting university decision-makers and educators.
 - Legal/compliance consulting and admin: \$20,000–\$40,000 annually to ensure data privacy and institutional compatibility.

Edu-AI plans to generate revenue through multiple channels:

- Institutional Licensing:
 - Annual contracts with universities based on usage:
 - Small institutions: \$10,000–\$25,000/year.
 - Medium institutions (e.g., 5,000 users): \$50,000–\$100,000/year.
 - Large institutions: \$150,000+ annually, especially if used campus-wide or across departments.
 - Includes core platform access, AI tools, LMS integration, and faculty customization features.
- Premium Individual Subscriptions:
 - Offered to students and educators at institutions without campus-wide licenses.
 - Pricing: \$6.99/month or \$60/year per user.
 - Potential to generate \$300,000–\$500,000 annually with a user base of 5,000–10,000 subscribers.
- Strategic Partnerships:
 - Integration with LMS providers (Canvas, Blackboard) or ed-tech companies via revenue-sharing or licensing deals.
 - Estimated early-stage revenue from partnerships: \$100,000–\$200,000/year, with high potential for growth as integrations expand.
- Scalability & Sustainability:
 - With 20 mid-sized institutions onboarded, total annual revenue could exceed \$1.5–\$2 million.
 - Growth in revenue expected through expanded subject support, upselling premium features, and deepening LMS integrations.
 - Cost structure is front-loaded but stabilizes as the platform matures and user volume increases.

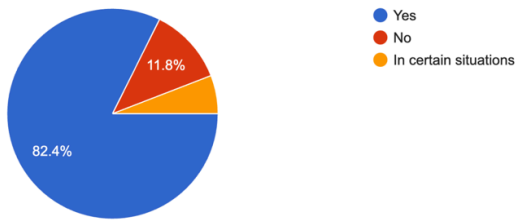
Edu-AI addresses a critical gap in the academic landscape by providing guided, ethical, and course-specific AI support. Unlike generic tools, it promotes real learning through instructor-controlled interactions that align with educational goals.

With strong market potential, scalable infrastructure, and a clear value proposition for both students and educators, Edu-AI is well-positioned to become a trusted solution in higher education. As we continue to expand its features and integrations, our goal remains clear: to enhance—not replace—learning through responsible AI.

APPENDIX A

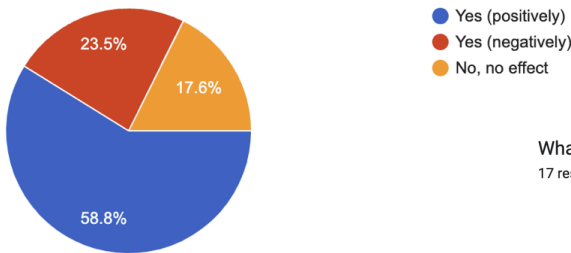
If a class had a tailored chatbot that wouldn't give answers but could give explanations and point you to specific class materials - would you use this over Chat GPT?

17 responses



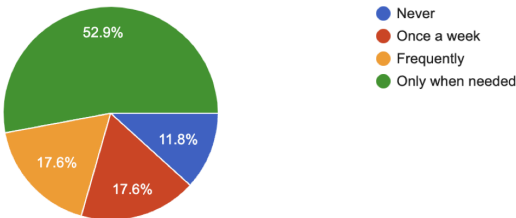
Do you feel Chat GPT has significantly impacted your performance in classes?

17 responses



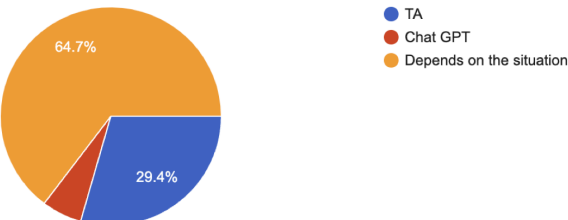
How often do you attend office hours for your classes?

17 responses



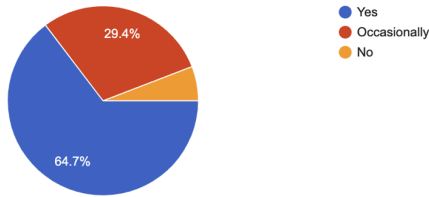
Would you prefer getting help from a TA or Chat GPT?

17 responses



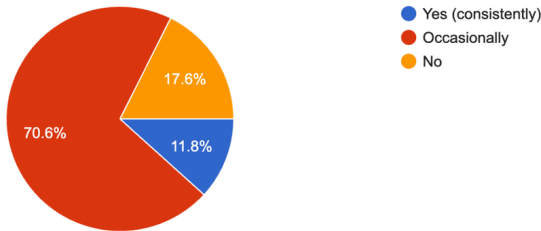
Do you use Chat GPT to walk you through problems/give you ideas, without directly giving you the answer?

17 responses



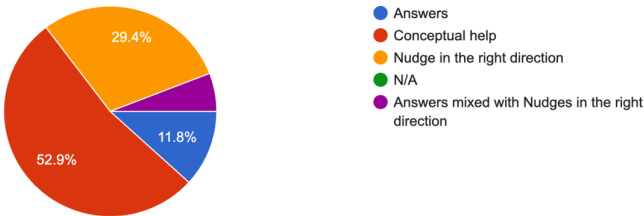
Do you use Chat GPT purely to get answers/complete your work?

17 responses



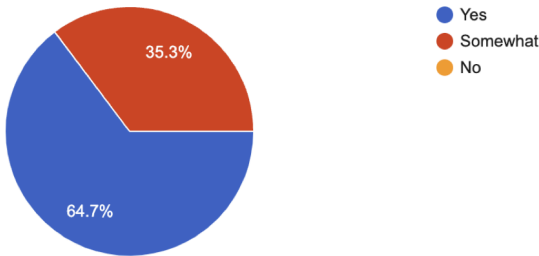
What do you aim to gain while getting helped by a TA?

17 responses



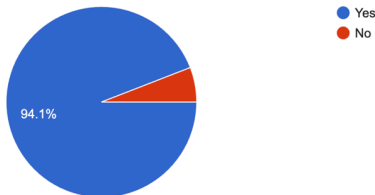
Do you view TAs as a valuable resource to get help in classes?

17 responses



Do you use Chat GPT (or other similar services) for classes and general study help?

17 responses



APPENDIX B

