

“AI in Education: Revolutionizing Learning and Teaching”

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Overview and Origins

The integration of AI in education promises to revolutionize the learning landscape by offering personalized learning experiences tailored to individual student needs. AI provides an equally critical resource for educators by automating administrative tasks and data analysis. AI allows educators to focus on fostering a supportive and engaging learning environment. Data-driven insights from AI can help identify and address achievement gaps, learning to improve educational outcomes for marginalized communities. Khan Academy has now released their AI assistant “Khanmigo” 100% free for educators.

Khan Academy was incorporated September 17, 2008. Salman “Sal” Amin Khan is the founder of Khan Academy, a free online non-profit educational platform. Sal Khan initially began this journey with a series of videos on YouTube to help his cousins with their studies. This eventually launched into a comprehensive educational resource offering free courses with a wide range of subjects.

Khan Academy is primarily funded through donations, grants and partnerships. Notable donors and foundations are the Bill and Melinda Gates Foundation, Google, Omidyar Network, Broad Foundation, and Craig Newmark Philanthropies. In total, Khan Academy has received tens of millions in donations. These foundations have been credited with support of education initiatives worldwide, and they believe Khan Academy can help expand access to quality education globally.

Business Activities

Khan Academy’s mission is to provide a free world class education to any and every one, worldwide. The organization recognizes that high quality education is not accessible to everyone due to socioeconomic, geographic, and systemic barriers. To solve this problem, Khan Academy offers free educational resources to anyone with internet access globally. As a former educator of 5 years, I’ve witnessed discrepancies from country to country, state to state, and even county to county. Educational inequities are crippling this world from its truest potential and Khan Academy aims to level the playing field, ensuring underprivileged students have the same opportunities to learn just as their more advantaged peers.

Khan Academy intended customers are students, educators, parents, educational institutions, and standardized test takers. Students are not limited to K-12, but also includes college students, and lifelong learners who wish to develop skills and revisit previous topics of interest. Classroom teachers use Khan Academy for additional resources to enhance their lesson plans. This foundation also serves as a staple for homeschooling educators/parents that requires structured and comprehensive learning material. It is a beneficial source for schools and school

districts seeking individual student's needs. Colleges and universities also use this source for remedial education. Due to this versatility, Khan Academy's market size is truly limitless as it aspires to reach billions of internet users globally.

Khan Academy differs from its competitors in several ways because it's free! This company offers free access to high quality education, and has made it the selling point in their business model. All resources are available to anyone with internet access, regardless of geographic or economic barriers. In comparison, many competitors offer free content but usually have premium content behind a paywall. Another advantage this company has is its broad spectrum of comprehensive and diverse content. Some competitors address specific needs, offer personalized learning paths, but are yet to use data analytics to tailor the learning experience.

Khan Academy currently leverages a variety of technologies to deliver and enhance its educational experience. The most relevant being AI and machine learning. Generally, these technologies are implemented to help develop tutoring systems that can personalize student needs and offer tailored assistance. More specifically, stacks such as SQL, Apache Spark, and Jupyter Notebooks are the frameworks to build and maintain its platform. Other stacks mentioned are React, Google App Engine, Javascript, GitLab/Hub, Python, and Google Analytics.

Landscape

In the education field, there have been many innovations and trends in recent years. Due to the teacher shortage and the Covid gap, AI and machine learning. Teachers can use AI-driven assessment tools for automated grading and feedback systems that help teachers evaluate student performance more efficiently. Many districts have also launched immersive learning experiences, and hands-on training for VR simulations for vocational training and medical education. Education is also increasing focus on STEAM (science, technology, art, engineering, and mathematics) education, with initiatives like coding curricula.

Khan Academy is one of the top programs using AI in education. Other major companies include Coursera, edX Bootcamps, Udacity, Code.org, and Brilliant.

Results

Khan Academy has had a significant business impact on various stakeholders, including students, educators, educational institutions, and the broader educational technology industry. Their company's economic impact supports workplace development and cost savings by making quality education more affordable. It offers subjects such as computer programming, lifelong learning, helping individuals enhance their employability and career prospects.

Khan Academy's platform personalized learning paths and adaptive technology help users achieve significant progress. Core metrics in education are mostly centered around learning outcomes. According to Khan Academy, MAP Growth is the nationally normed standardized assessment. This program is designed to help learners achieve proficient/mastery in their desired subject. The Every School Succeeds Act(ESSA) was created in 2015 as a replacement

for No Child Left Behind. The ESSA tiers of evidence has provided schools with the best practices to assure the best results. According to ESSA, studies indicate Khan Academy's approach is more than successful as it helps improve scores and serve as a viable resource.

Recommendation

Khan Academy has done a plethora of things correctly, and it's challenging to critique. My question is why haven't I heard about it more. Educators are struggling for resources that are continuously limited, or discontinued by the district. My number one recommendation would be marketing and outreach. There should be targeted campaigns specifically for all of those communities that need it the most. I'd start with the states that ranked the lowest in education across America. A free product is the best selling point! A marketing team would help this company achieve its goal of providing education globally. I would also propose improving user interface experience. I would strive to simplify navigation by suggesting ways to streamline the website or app navigation. The goal is to make the site easier for users and access courses. I'd also suggest new content areas or subjects that are currently underserved. These technologies will assure a user friendly site, and will encourage new users to interact more frequently.

Resources

<https://www.khanacademy.org/college-careers-more/ai-for-education/x68ea37461197a514:ai-for-education-unit-1/x68ea37461197a514:ai-welcome-to-the-future-of-education/a/ai-101-what-is-this-course?lang=en>

<https://blog.khanacademy.org/10-creative-ways-to-leverage-lesson-plan-ai/>

<https://blog.khanacademy.org/communication-for-custom-developer-tools/>

<https://blog.khanacademy.org/multiple-studies-show-khan-academy-drives-learning-gains-evidence-for-our-platforms-effectiveness/>

<https://stackshare.io/khan-academy/khan-academy#stack>

<https://www.tealhq.com/company/khan-academy#:~:text=Khan%20Academy's%20central%20mission%20is,their%20background%20or%20financial%20status.>

<https://blog.khanacademy.org/why-khan-academy-will-be-using-skills-to-proficient-to-measure-learning-outcomes/>