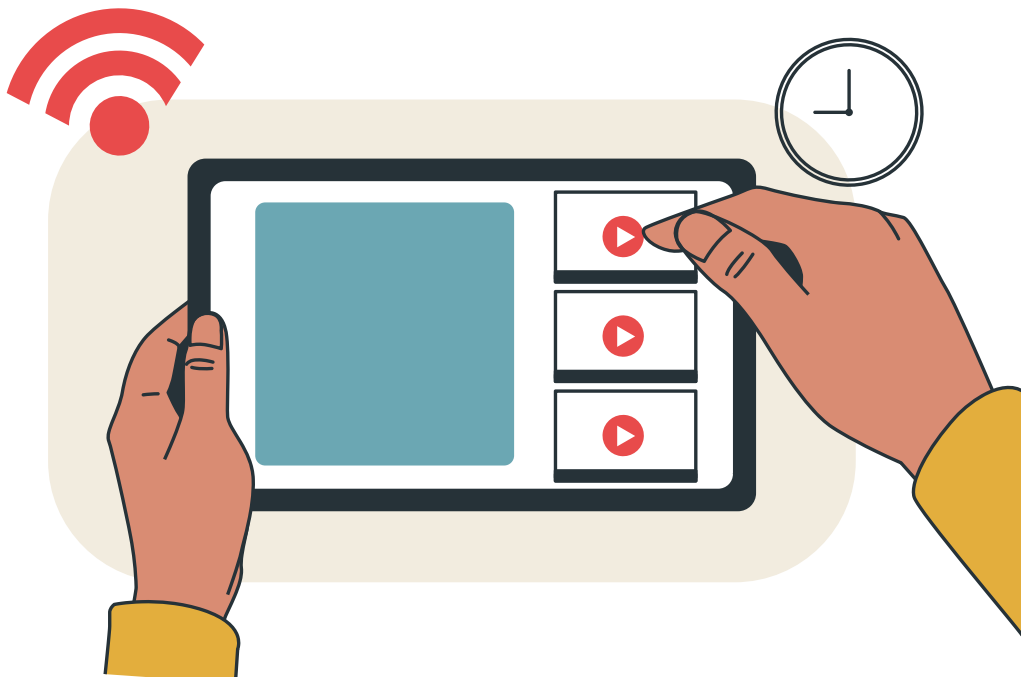
Insights on designing EdTech platforms

by Onething Design

Domain Intro

Edtech, a portmanteau of the phrase “education technology," is the combination of IT tools and educational practices aimed at facilitating and enhancing learning. To increase chances of success in almost any sector, spotting and nurturing talent from a young age is considered to be crucial. While the mainstream education system in India (and globally) is progressing rapidly, it often falls short of equipping students for a tumultuous life ahead of them.

Online education in India has seen active growth over the last decade. The factors that have led to this growth are better telecom and internet bandwidths across India leading to growth in the usage of smartphones and hand-held devices, advancement in video conferencing technologies, advent of technology platforms for seamless transfers, and an ever-increasing need for convenient education.



In the last three months, edtech ventures have garnered USD 686.32 million in 21 funding rounds, a marked improvement from 450 million in 87 rounds in 2019, according to analytics firm, Tracxn. And with the shutdown enforced by the Indian government to control the spread of Coronavirus (COVID-19), the education system in India is undergoing a paradigm shift. Much of the country's $180 billion education sector is going online to adapt to the new reality.

Research

Users

The primary users for a Edtech platform is Students between the ages of 5-30. These primary users can further be broken down into 3-4 categories. Ages 5 to 12, 13 to 19, 20 to 24, 25 to 30. Each of these categories have a different set of goals and decision making capabilities. As an overall trend, as the age increases, the involvement of the child in the decision making process increases. With respect to goals, a child who is between the ages of 5 to 12, the main goal is to have fun while for a student between the age of 17-20, acquiring relevant skills is a crucial goal.

The secondary users for this industry are parents. They play a very critical role in the decision making process and hence a very important stakeholder in this process. Their involvement in the decision making process keeps reducing as the child grows and starts making his/her own choices. For students above the age of 24, the parents in most cases are barely involved since the students tend to be financially independent.

The tertiary users of EdTech Platforms are Teachers and Instructors. They play a very important role in the ecosystem since their contribution to the student success is very high. It's often recommended to consider teachers and instructors as the secondary users instead of parents since they are responsible for the learning process.

Tech behavior

Today's students (all age groups) are increasingly savvy about the role technology plays in modern life. And most traditional educational systems are not keeping up in this area. Project Tomorrow's Speak Up survey, which polled more than 300,000 students, parents, and administrators about 21st-century skills and technology use in school, found that students are increasingly discontented with rules that limit their access to technology at school and prohibit them from using the tools and devices they use outside school, such as cell phones, e-mail, and text messaging. In addition, more than 40 percent of students polled in grades 6–12 cited their teacher as an obstacle to using new technology in the classroom. However, the Covid pandemic has helped teachers become tech-savvy by shifting from classroom lessons to online learning.

A majority of teachers were not familiar with gadgets or online classes, but now they have learnt a lot about e-learning techniques and strategies to keep their students engaged. Some of them have learnt from their children, while a few have gained knowledge from their colleagues.

Insights from Research

Insight 1

Indians are more than willing to pay for these edu tech services. Income elasticity towards the expenditure on education-related products is lower than healthcare indicates that at various income levels, Indian consumers would prefer compromising on healthcare expenses rather than education.

Insight 2

Apart from test prep and online certification, another edtech subsector which is gaining popularity is skill development. Related to online certification, skill development focussed on updating the skills among young and experienced workers from non-digital to digital needs

Insight 3

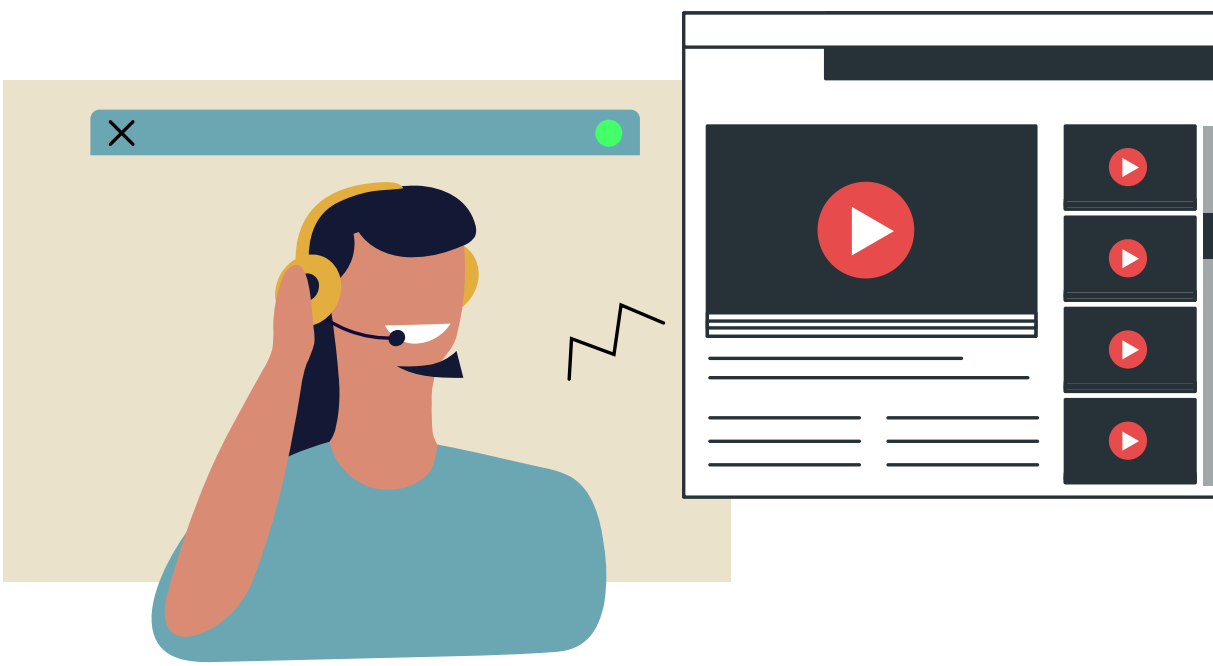
Despite great progress in terms of internet and smartphone penetration, exposure to new ideas and systems of learning and the rising awareness for the value of quality education — beyond simply gaining the most marks — India is still an exam-centric educational market.

Insight 4

The effects of the primary school learning deficit are felt at college and university level, where students have made it after rote learning and striving for marks. Skilling and certification startups are cashing in on this deficit. As per a study by KPMG, the estimated market size for the online certification and the reskilling industry is estimated to be $463 Mn (2021) growing at a compounded annual growth rate (CAGR) of 38% since the year 2016.

Problems that design can solve

01. Edtech startups can't scale effectively without customer feedback, but the customers often demand that the kinks are worked out before they make a purchase. For example, Upswing provides virtual services to community college students to decrease drop-out rates. With research, they could better prove their model and scale faster. But buyers aren't going to provide the resources for research and development (R&D). Hence having a firm foundation of user research is very crucial. Cell-Ed, which teaches low-income workers literacy and other skills through mobile phones, conducted a two-year pilot study to prove effectiveness before launching. Apprendis, which has developed a virtual science lab and automated assessments for middle schoolers, grew out of a decade of research and recently received a grant to continue its R&D.



02. Technology can create detached and impersonal learning environments, and even widen the achievement gap we see today. Technology is a tool that helps us develop and apply skills we all value — curiosity, problem-solving, persistence, collaboration, information literacy. Technology has the potential to make learning more equitable, engaging, and relevant for learners of all ages and backgrounds.

03. Cyber-security and digital privacy rank among the top concerns of all consumers, including consumers of education. There is a large market for improving the efficacy of existing products and creating new ones that will help manage student data and protect the privacy of these young individuals. Design can be used efficiently in keeping the student, teachers and parents informed about the student's safety.

Design-driven Solutions that can improve business ROI

1.Building empathy to understand the users

Different methodologies, methods and techniques can be used when designing for students. The Cooperative Inquiry methodology works very well for this use case because it has the highest user involvement compared to the others. It treats users as full design partners over the whole duration of the design process, equal to the professional adult designers on the team.

While working on the website for Leverage Edu, we achieved this by arranging content intuitively, as per the user. For example, highlighting the achievements and testimonials of students front and centre helped us establish trust with students gaining comfort and confidence in the platform as they visit it.

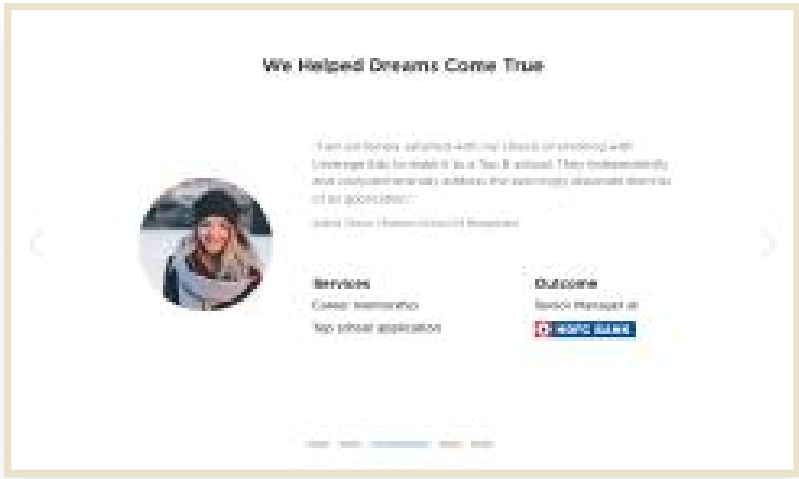


Image: A user testimonial to build empathy in Leverage Edu

2.Immersion and gamification are just a few examples of turning boring subjects into fun experiences

Oftentimes, students find it difficult to stay focused in a classroom, this issue is magnified tenfold when unsupervised with a device in hand. However, the benefit of a learning platform designed around new technology is that topics and concepts can be delivered and revised in a handful of ways. One of these is the gamification of the learning experience, which seems to benefit learners of all ages.

We incorporated a similar concept when designing Disprz, an EdTech platform to allow employees within an organization to partake in skill-development courses, or tutorials. Our research led us to incorporate quizzes, and questionnaires to ramp up the interactivity of the learning experience, as well as having a leaderboard to incentivize repeating topics for greater understanding!

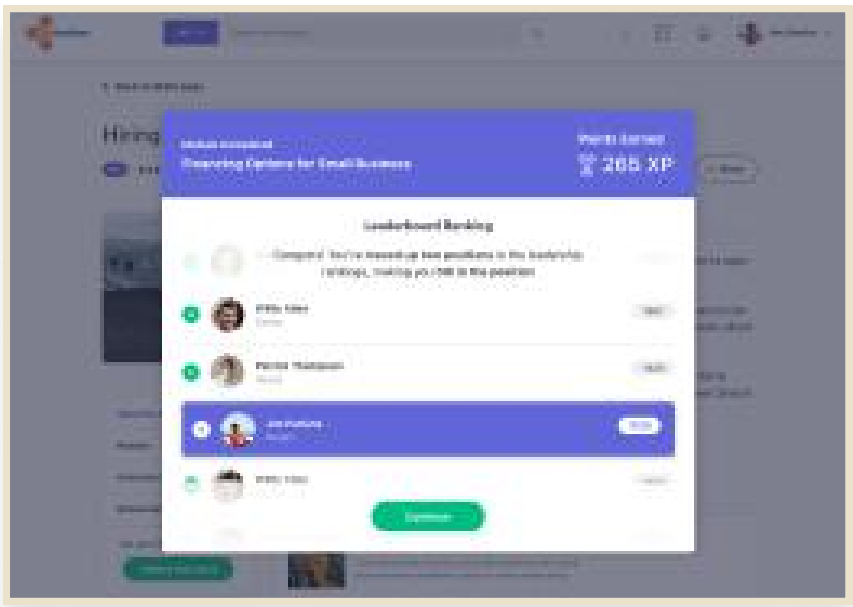


Image: A quiz ranking leaderboard to gamify the learning in Disprz

3.Learners can learn just about anywhere and at any time they want

They can go as fast or as slow as they want. They can even go back to previous lessons and get support online. The idea of remote, or “virtual,” education, takes place outside of a physical school building. With this method, students complete courses at home using online content, including videos of instructors in front of an actual class. Another benefit of virtual education is that teachers can utilize video conferencing and social media technologies, as well as a variety of subject-matter experts to convey information and check for understanding.

In Disprz, we allowed learners to take learning at their own pace, when and where it was convenient for them. Using a combination of audio and visual learning techniques, learners can pick up or drop lessons, whenever it’s convenient for them, and the dashboard design supports this philosophy.

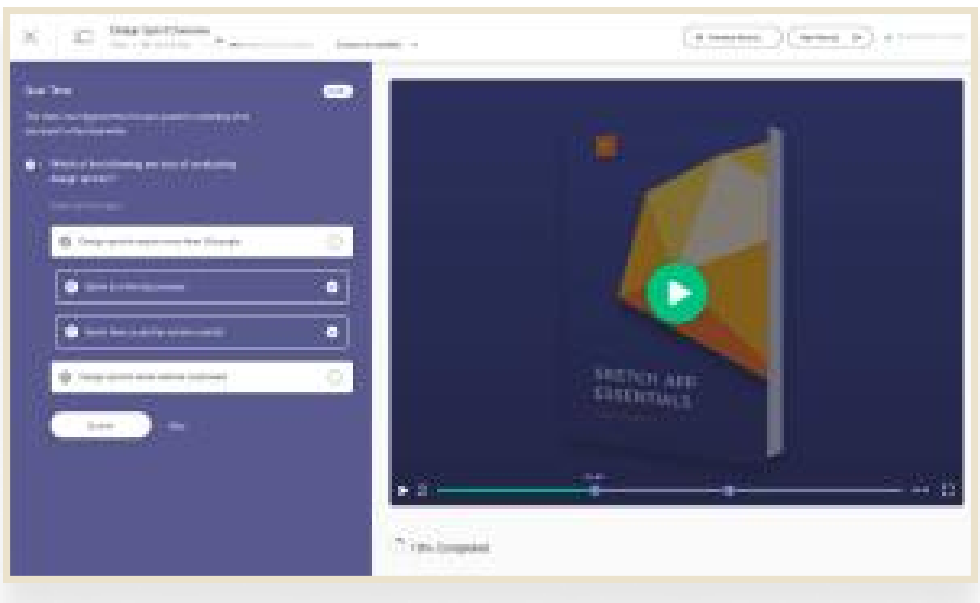


Image: The learner dashboard of Disprz, allowing users to set their own pace

4.Engaging students with virtual and augmented reality, using tech to mimic real-life settings

Artificial intelligence (AI) has gained a lot of traction in the market recently. Tech companies can use this technology to provide educational facilities with virtual mentors and teaching assistants, as well as improved automated grading systems.Virtual and augmented reality (VR/AR) is a popular gaming technology that entrepreneurs can use to enhance student learning. At some schools, students are already taking “virtual” field trips with a VR headset. Estimates project instructional AI and VR expanding into a multibillion-dollar industry in the near future.

When working with Disprz, we thought it would be interesting to include a “whiteboard lesson” option for instructors to build their lessons around, invoking a more classic learning experience, but placing it in a modern setting, with the benefit of current technology to facilitate e-learning.

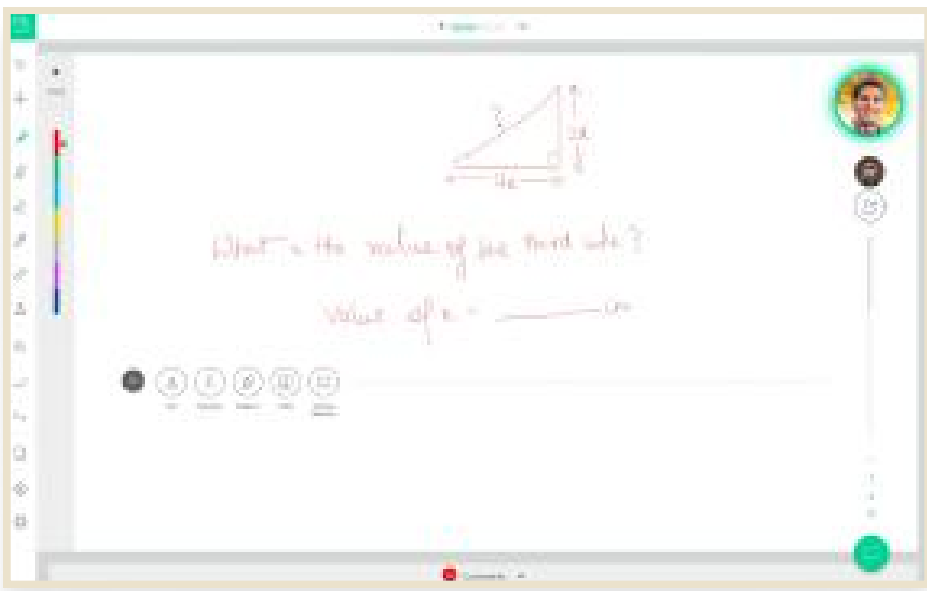


Image: A digital whiteboard, to show the state of modern learning in Disprz

5.Immerse users with functional, interactive tools

A big challenge, particularly with Ed-Tech is finding new ways to immerse users, normally students, and constantly fighting an uphill battle with short attention spans. Incorporating tools which users can sink significant time into can help combat this, and improve user retention and immersion. We did this on Leverage Edu. by incorporating both an AI powered “find your university” tool, in which certain inputs from the user would tell them which institution fits their needs, as well as a “cost of living calculator” in which a rough monthly expense for an institution's student.

Both tools are not just functional, providing services which most students out of school would seek, but also repeatable, allowing for users to input separate data, and get different results. This gave users reason to stay on the site beyond the initial functionality.

6.Interfaces are designed to give teachers data on how students are faring, saving time and effort

As schools continue to incorporate Ed Tech into the classroom, communication between teachers and parents will flourish. Teachers will take advantage of the interfaces that track assignments and report student progress to all involved parties. Therefore, businesses will do well to supply new and better communication channels. Big data can help teachers learn more about their students. Interface-assisted learning can yield valuable information about how children learn and in which specific areas they are struggling. For example, a student might fully understand the material but get confused by the format of a test.

7.Identifying and catering to different kinds of users

Part of the beauty of Ed-Tech platforms is that there are no predetermined demographics or age-groups laid out in advance, like in a conventional classroom, anybody from any background could be accessing the platform at any time. For this reason, to build a personal connection with each and every user, it's important to broadly identify the types of learners which are coming through the door, to give a more personalized experience based on their needs.

An example can be seen in our work on the website for Leverage Edu, a leading Ed-Tech platform. We created three user personas based on the average users which accessed the site, those being; school student, college student, and working professional. We took these personas and created three distinct landing pages so that anyone arriving would be seeing exactly the content they needed to.

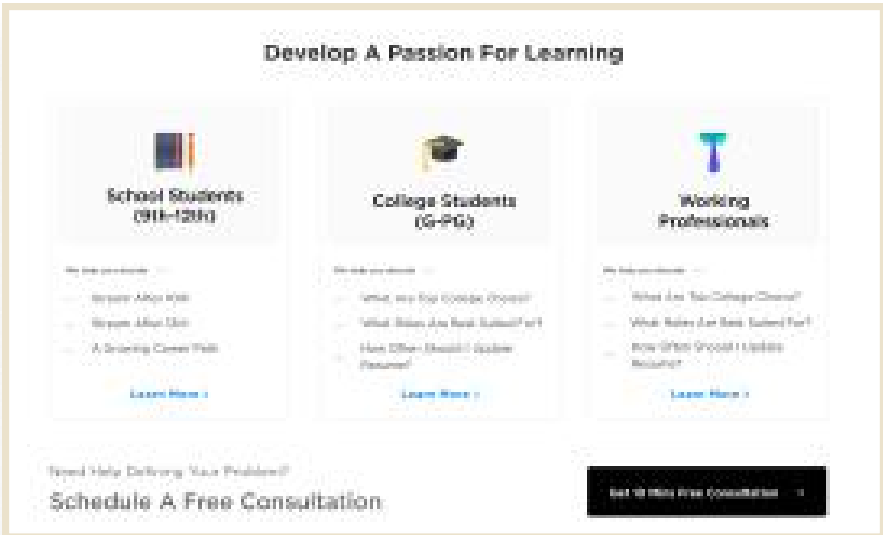


Image: Allowing learners to pick their current situation, and get a curated experience in Leverage Edu

8.Give Instructors Control Over Learnings

With the end user most likely being analyzed as the student in most cases, it's easy to get carried away and forget to design for teachers as well. Maintaining a balance between those who will absorb the information, and those who provide it is important, and teachers should be given functionality to tailor the learning experience for students as they see fit.

For example, in our work with Disprz, we designed a separate dashboard for the skill providers in organizations, so they could mould the program to best convey key points to employees. This 'skill creation' dashboard allowed not only new courses to be constructed, but also allowed for progress tracking of those enrolled, to see how the students were progressing.

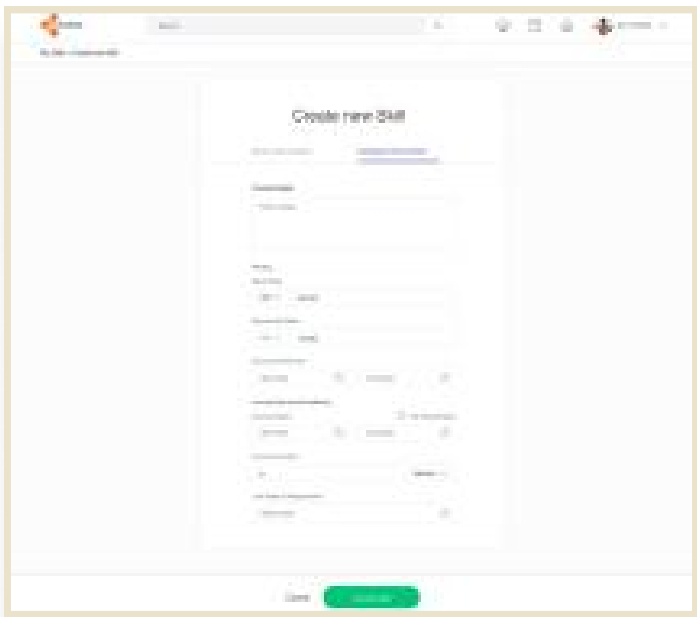


Image: Skill creation dashboard for instructors to make bespoke lessons for students in Disprz

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10.Less Focus on technology and more focus on learning

Technology is not the solution in and of itself; however it is a critical enabler and key component of the solution to the challenges facing education. EdTech companies that yield the best results are those that are tailored to unique educational challenges. A little more empathy, collaboration, and optimism can go a long way in designing more effective learning tools.

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