DIGI EDU HACK 2023

DIGIEDUHACK SOLUTION CANVAS

Title of the solution: SMART STUDY

Challenge addressed: Improvement of educational practice and student training

Team name: MUTATINTA

Challenge category: Technology disrupt

Describe it in a tweet

Proposing a comprehensive edu platform for schools and home, streamlining teacher-student interaction. Features: personalized learning, adaptive material, and student profiles for tailored education. Virtual assistant with biometrics for real-time feedback. Regular updates for cutting-edge tech and customizable learning. #EdTech #PersonalizedLearning

Solution description

We propose a platform that functions as an integral educational solution for use in schools and at home, providing an excellent tool for the teacher to record the student's learning, objectives and interests, as well as helping to readapt study material to new forms such as quizzes, exams or revision material adapted to the student's profile in order to achieve personalised education, saving the teacher time and making it easier.

By creating a profile of the students where their personal goals and interests are recorded, a new way of studying that is aligned to their lifes will be provided, which reduces fatigue and frustration, as well as a virtual assistant that has the ability to adapt to their specific doubts and that can focus on the areas that are difficult for the student by detecting their complications using the analysis of their metrics and data.

The aim is for this platform to have the capacity to expand to the use of biometric data, such as a brain signalling headband that records in real time the student's attention, emotions and state of learning so that it can keep a record of new parameters that make the platform more efficient and improve its work by adapting to the student's needs, as well as more efficient real control in detecting the type of educational method and resources that achieve better results and can be accessible to schools or students.

The software will be kept updated to the state of the art for the integration of technology that will give us the capacity of a tool with course creation, more accessibility and the ability to further customise the education aligning it with the student's day to day life so that they have applicable teachings of value.

Target group

Our target group consists of primary and secondary school students and teachers. For teachers, we provide a powerful tool that supports their teaching, saves them time grants the opportunity to generate educational materials based on the resources provided by the teacher and educational institutions, focused on the student's profile in an efficient manner.

For students, we deliver personalized education that allows them to relate knowledge to their areas of interest, and help work on their areas of opportunity based on the skills reflected on the platform.

Impact

We want to create a platform that helps students learn in a way that suits them best, and avoid the feeling of frustration and low self-esteem that often comes with traditional education. We will measure the impact of our project on the students and schools by looking at their overall academic improvement. This will also benefit the parents who are concerned about their children's learning and education, as they will save money on extra courses and classes. Moreover, the teachers will have less work to do, as the platform will provide them with tools to easily assess their students and manage assignments.

Another impact that may be harder to measure, but is equally significant, is that parents, students, and teachers will experience less stress because of the convenience of learning.

Moreover, we hope to extend our project to many schools both nationally and internationally, and to see this innovative approach adopted on a large scale.

Context

The rigid structure of the educational system, inherently non-personalized, proves ineffective for many. This inadequacy impacts a staggering 27 million elementary and secondary school students in Mexico, contributing to alarming dropout rates. The burden extends beyond students; teachers, exceeding regular work hours, strain to prepare outside of school, compromising their well-being and teaching quality. Moreover, families face financial strain, compelled to invest in costly individual tutors due to systemic inadequacies. These challenges not only hamper immediate learning but also deepen socio-economic disparities, underscoring the urgency for innovative and inclusive educational reforms.

Innovativeness

	Current educational system	Direct compentece	SmartStudy
Personalized for each student	X	✓	✓
Uses biometrics	X	X	✓
Strengthen underdeveloped skills	✓	✓	✓
Economically accessible for parents and institutions	✓	X	✓
Reduces stress and fatigue in students	X	X	✓
Gives feedback to parents anytime	X	✓	✓
It is cutting edge technology	X	X	✓
Provides the teacher with tools to optimize their time	X	✓	✓
Gives insights of student's tendencies and progress	X	✓	✓

Transferability

Our platform is a versatile solution that leverages AI to meticulously and seamlessly adapt to diverse learning contexts. While primarily focused on foundational education, its flexibility extends beyond conventional boundaries, catering to subjects like music, specialized corporate skills, and more without age limitations. This adaptability enables us to serve a wide spectrum of learners. Additionally, our platform offers a promising alternative for adults in developing countries seeking to complete their primary and secondary education, effectively addressing educational gaps and providing essential knowledge. This versatility showcases our platform's capacity to meet evolving educational needs across various contexts.

Sustainability

We propose a world where students from all backgrounds and circumstances can benefit from this tool, not just those in private schools. We aim to empower children who lack access to formal education, as well as those who attend public schools, to learn in their own way, at their own time and pace. This way, they can improve their academic performance and achieve their full potential. Our vision is to enable a sustainable and equitable future for all students. We also aim to in the future integrate EEG signals into the platform to improve the quality and effectiveness of learning. With these goals in mind, we hope to create a world where every student has access to high-quality education, regardless of their background or circumstances.

Team work

As a team of six driven college students, our collective expertise spans multiple disciplines crucial to tackling today's educational challenges. With two software engineers, two mechatronic engineers, and two biomedical engineers specializing in neuro and neuroeducational research, we're a diverse group united by a common passion: addressing educational disparities in our country and globally. Our varied backgrounds not only bring technical proficiency but also a deep-rooted commitment to leveraging our skills for positive change. Beyond our individual skills, our team's strength lies in our collaborative synergy. Each of us is driven by a shared belief in the transformative power of education and a dedicated focus on finding innovative solutions to empower learning for all. Click below to meet us.

Diego M. Biomedical · Gabriel G. Mechatronics · Jairo B. Software · Sabrina G. Biomedical · Santiago P. Mechatronics · Siddhartha L. Software

Platform preview
Video