Learner-Centered Exemplar

Who We Are & What We Do

Latin America is in the midst of an educational crisis, with over 70% of 10-year-olds struggling with literacy and numeracy (Azevedo et al., 2022). At Mentu, we leverage AI to bridge this gap, empowering teachers to improve classroom instruction and student outcomes. Our objective is to **expand access, inclusion, and learning of all children and youth**—not just the average learner— and to promote whole learner wellbeing for across different demographic and socio-cultural groups, particularly for those from marginalized backgrounds.

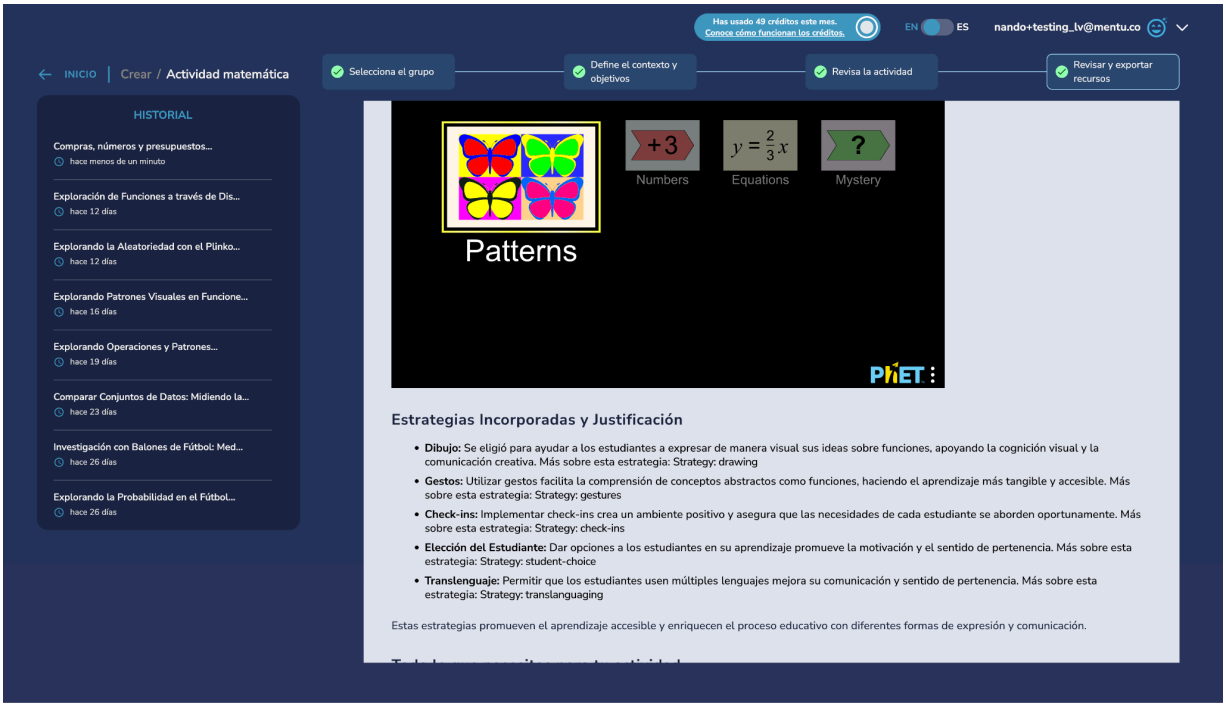
To do this, we are building Shaia, an AI-based personal coach for teachers that supports educators through the full cycle of teaching. This ranges from planning (before class), to enacting lessons (during class), and to reflecting (after class) on their practice and students' outcomes, all while seeking to incorporate research-based best practices that support learner variability. With Shaia, we're helping bridge the gap between what is known and proven to work and what happens in the classroom. We use technology, in particular AI, to provide coaching and in-classroom help to teachers to support learner variability, without bearing the significant costs of large teams of coaches. We are currently developing (and soon will be implementing and testing in a large school district in Colombia) a suite of tools with specific emphasis on math. Shaia's cognitive architecture is being built with resources from Digital Promise's Learner Variability Project, a set of curated high-quality lesson-plans and other resources from the Stanford Graduate School of Education's YouCubed project, and the University of Colorado Boulder's PhET Interactive Simulations project.

How We Think About Learner-Centered in Our Design Process

Shaia is a coach that ensures teachers' deep and contextualized understanding of their students is forefronted so that learners' unique strengths and challenges are at the core of all decision-making. Our AI-design principles follow a human-in-the-loop approach, where teachers are not just end users but active collaborators with the technology (and throughout the iterative software design process). In the end product, this means that AI-generated lesson plans and learner variability insights serve as dynamic, adaptable tools rather than static prescriptions. Teachers have the autonomy to review, modify, and refine AI-generated outputs either manually or with AI support, ensuring alignment with their pedagogical goals, contexts, and the specific needs of their students. We understand that ***context* is key to supporting diverse students**, and teachers are encouraged to provide as much context to the system as possible through chat interactions and forms that they fill.

A key aspect of our design process is supporting teachers in making informed instructional choices rather than allowing AI to dictate classroom decisions. The AI suggests evidence-based strategies, but the teacher remains the final decision-maker, choosing and adapting strategies to best fit the unique context of their classroom. Shaia (the AI), creates a lesson plan that integrates learner variability strategies from the Learner Variability Navigator (LVN) and an explanation of why each strategy was selected. Strategies have been translated and contextualized for the Latin American context, initially for Colombia.

We not only provide a software tool but also partner with school districts and networks to provide targeted professional development about best practices in teaching and learning, learner variability, and the use of our tools. Through synchronous, asynchronous, in-tool and off-tool strategies, we strive to ensure that educators understand how AI arrives at its recommendations, fostering trust and informed decision-making. This commitment to transparency extends to data governance and user control. **We ensure that teachers' and schools' data are not used outside of the needs of each teacher** and that they are not used in the general training of foundation LLMs.



Why Learner-Centered is Important in Our Product

Ultimately, our goal is to empower teachers with AI that is responsive, research-informed, and context-sensitive. We ensure that the teacher is included as a valued and trusted collaborative partner alongside AI to foster effective, inclusive, and adaptive learning environments for all learners..

"Dentro de tantas cosas que uno ha visto en este tema [de la IA] no pensaba que podía perfilar un estudiante virtual y luego recibir unas posibles respuesta para no chocar en el aula"/"Among all the things I've seen on this topic [AI], I never thought I could profile a virtual student and then receive possible responses to avoid conflicts in the classroom."

— Wilmar, 6th-8th grade math teacher/profesor de matemáticas 6 a 8

Digital Promise