

EDT & PARTNERS



*Empowering Education with an AI  
Learning Companion*

## Introduction

The University of Luxembourg is a modern, multilingual research university with a strong focus on fostering research, innovation, and education at the highest international standards. Its work supports Luxembourg's shift toward smart, sustainable, and inclusive growth and addresses today's societal challenges.

The institution strives to match its world-class innovation and research standards with equally advanced teaching methods. While excitement around AI was growing, generic tools often fell short — offering inconsistent answers and little educational value. The university partnered with EDT&Partners and Amazon Web Services (AWS) to leverage AI capabilities through Lecture, the first open-source GenAI framework for education, built to enhance teaching, engagement, and equity.

**Eric Tschirhart, Professor of Physiology,** and **Dr. Christian Grévisse, Computer Science & EdTech Specialist,** share their experience working with EDT&Partners.

## The Gap between AI and Pedagogy

**Prof. Eric Tschirhart:** At the University of Luxembourg, we had been looking at large language models for a while, but what I saw was mostly hype. My students were even paying for tools like ChatGPT, only to receive long, unfocused, and sometimes contradictory answers.

I had this idea some time ago of creating an agent that could use my course materials to assist students, specifically in understanding and responding to the course's learning objectives. In my field, this is relatively straightforward because the curriculum is regulated by a European directive that standardizes the learning objectives.

That means we can't just teach anything; we must adhere to the defined framework. This adds more complexity: when designing or guiding teaching and learning content, we must also ensure compliance with these regulations.

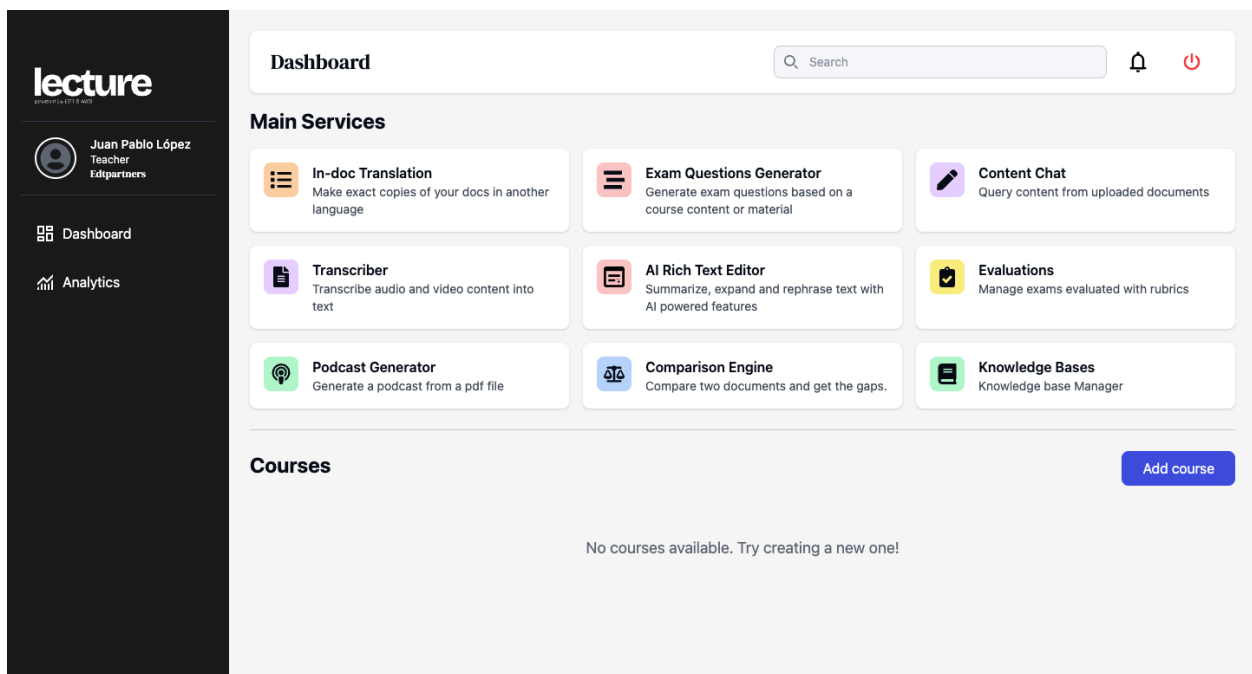
Our challenge was finding an AI solution that was educationally sound, GDPR-compliant, and inclusive.

## How the University of Luxembourg Began Its Collaboration with EDT& Partners and AWS

**Dr. Christian Grévisse:** When we looked at the AI tools already on the market, many of them seemed appealing at first glance. Some learning management systems (LMSs) even include AI features. However, the problem was always the same: they worked alongside the teacher, rather than with the teacher. You couldn't feed them your own material in a structured way, you couldn't set guardrails, and you had no real control over the answers they gave. For me, that was unacceptable. I needed something that would only respond within the boundaries of my course objectives and materials.

The EDT&Partners team made the entire process simple for us, giving us the benefits of AWS without the headache. In the end, it wasn't just about choosing a tool—it was about selecting a partner focused on customer needs who could help us build exactly what we needed and guide us through the entire process.

What convinced me even more was how the EDT&Partners team worked with us. They were responsive, they listened carefully, and they weren't afraid to ask the hard questions that made the product better. We had weekly meetings, sometimes twice a week, and most issues were resolved in a day or two. This level of responsiveness is rare in academia.



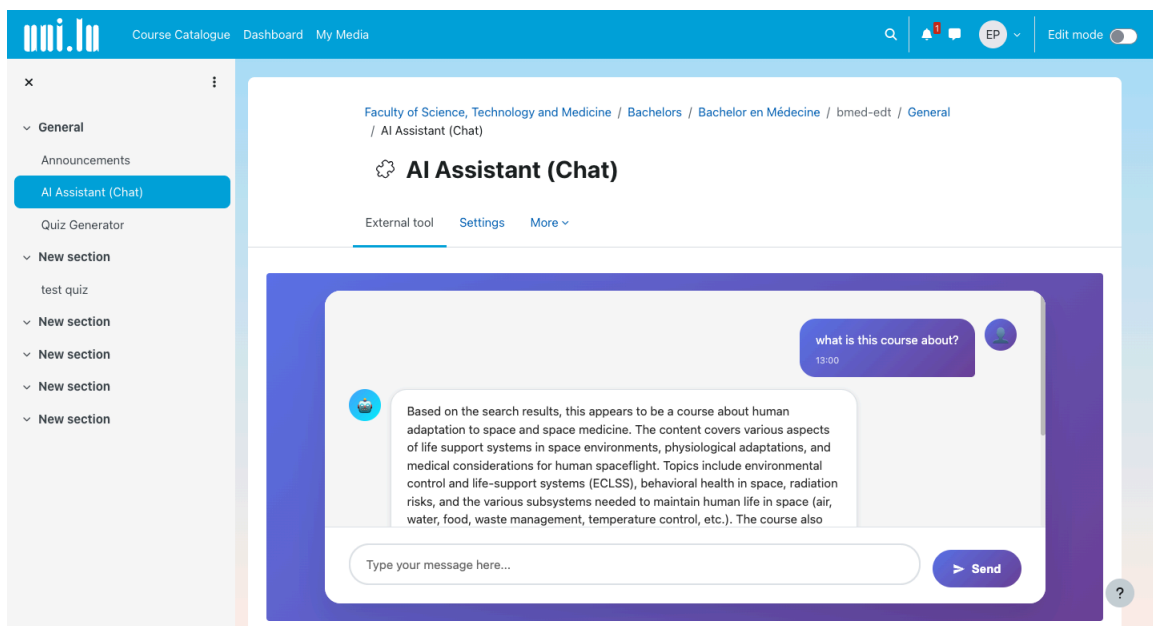
## Seamless AI Implementation

**Eric Tschirhart:** The primary goal was to amplify the impact, data, and experience of lectures by leveraging advanced AI capabilities. The implementation helps us enhance faculty lecture preparation through intelligent content analysis and support tools. It also contributes to student engagement and learning outcomes with personalized, AI-driven resources. Additionally, we now have access to comprehensive analytics that enable us to measure and optimize lecture effectiveness. For us, the implementation of Lecture happened in two main phases. The first phase was the development phase, during which I shared all my course materials and pedagogical content with the EDT&Partners team.

**Dr. Christian Grévisse:** The second phase, on the technical side, was actually quite simple. The contact with the tech team was steady and always responsive. If there were any bugs, they were fixed quickly. For any LMS administrator, it's really straightforward. The documentation is comprehensive, containing everything you need, and the process itself is straightforward.

## Building Better Lectures with AI

**Prof. Eric Tschirhart:** For me as a teacher, Lecture has forced me to raise the quality of my content. Preparing material for an AI agent means that every slide and every explanation must be precise. It takes time, yes, but it also makes the course stronger. Instructors at the university can utilize generative AI to create personalized learning paths, evaluate assessments, translate documents, and generate creative assets. Another benefit is assessment. Because I feed my own exam questions into Lecture, students can practice with the kinds of problems I actually expect them to solve. It aligns their preparation with what really matters.



## How Lecture Democratizes AI For Education

**Prof. Eric Tschirhart:** For the students, we want them to stop wasting time wading through long, generic AI answers. With Lecture, every answer comes from the content I created and validated—and that makes all the difference. They can ask questions freely, without the hesitation that comes from raising a hand in a crowded theater.

**Dr. Christian Grévisse:** For me, one of the most powerful things about Lecture is how it democratizes access to quality learning and exam prep. Some students can afford private tutoring or paid AI tools, but many simply cannot.

**Prof. Eric Tschirhart:** Here in Luxembourg, tutoring can cost between three and seven thousand euros a year, and I've had students tell me it's out of reach. That was one of my primary motivations: to close that gap. I wanted every student to have the same access to high-quality support, free of charge. It's a matter of societal interest.

## Advancing Interoperability Through Open-Source Collaboration

**Dr. Christian Grévisse:** At the University of Luxembourg, Moodle has been our backbone since 2007. When LTI integration with Lecture became available earlier this year, it was a real game-changer. It provided us with a clear, transparent way to connect Lecture to our LMS while remaining compliant with GDPR.

For me, that was the turning point. Suddenly, we could bring trusted, course-aligned AI into the classroom without adding complexity.

**Prof. Eric Tschirhart:** One of the reasons we chose Lecture is because of its open-source technology, which offers pedagogical observability. I wanted to know precisely what the system was feeding back to students. Every answer is built from the material I provide—unlike other LMS add-ons, where the model is a black box and you have no real influence over what it produces.

The second reason was collaboration. The development team has been incredibly open to our feedback. When Christian or I had ideas, they didn't just nod politely—they actually built them into the roadmap. In that sense, the Lecture is open in two ways: the code is open source, and the process itself is open. And that makes the project feel less like buying a product and more like building something together.

## Measurable Outcomes & Constant Progress

**Prof. Eric Tschirhart:** We launched Lecture on September 15, 2025, with approximately 200 students across four bachelor's programs. By Christmas, I expect more than half will be using it, especially as exams approach. We'll track usage, the types of questions asked, and how it supports exam prep, always within the boundaries of faculty-approved material.

But this is only the start. I want to see Lecture expand. For example, Law studies is a clear next step, with its structured, regulated content. We also need to meet students where they are—on their phones—by integrating Lecture into the Moodle app. And with Christian working closely with the EDT&Partners team, we'll continue to shape new features.

## Summary

The University of Luxembourg wanted to bridge the gap between pedagogical needs, technological innovation, and equitable access to AI-powered learning. The institution partnered with EDT&Partners and AWS to develop an AI assistant based entirely on university-approved materials and aligned with strict educational objectives. With Lecture, students can trust that every answer reflects validated content, while teachers gain tools to strengthen course quality and offer equitable learning support.

