# AI FOR MULTILINGUAL COMMUNICATION









There are 17 pupils from different linguistic backgrounds in my class. Having grown up here, I speak the three official languages, and also English. But many parents don't speak any of these well. It is essential for the children's progress that the parents and I collaborate.

Language barriers make this often difficult and it is time-consuming to translate all messages and assignments.



/imagine prompt: Use symbolic elements like linguistic hurdles, language barriers, or giant language textbooks as physical obstacles that students need to navigate. Two students facing each other. These obstacles could be placed in the path of students who are trying to reach a common educational goal, emphasizing the difficulties they face in a multilingual environment. Incorporate vibrant colors, diverse characters, and unique typography to convey the beauty and complexity of linguistic diversity in learning.

Midjourney

Imagine prompt: Use symbolic algorithms like linguistics

/imagine prompt: Use symbolic elements like linguistic hurdles, language barriers, or giant language textbooks as physical obstacles that students need to navigate. Mobile devices, digital translate, mobile phones. Incorporate vibrant colors, diverse characters, and unique typography to convey the beauty and complexity of linguistic diversity in learning. White background

Our school uses an Al-based communication system that automatically translates messages between me and the parents. When parents enrol their children, we register their language preferences. I can write or record my message in one language and then select the recipients. The communication system translates my message into the parents' language and dispatches it.

The parents, too, can access the system via their **smartphones**. They can reply to me in their language, and I will receive it in mine. We also use this system for meetings or phone calls with real-time translation-transcription.



This AI-based system helps me communicate better and more respectfully with the parents in a multilingual context like Luxembourg.



Key Issue



Language barriers between teachers and parents

#### **Useful tools**



Family-school communication tool





Open source translation API





Open-source framework for neural machine translation





Open source automatic speech recognition (ASR) system





streamlabs

Multilingual video transcription



AI FOR ADAPTIVE CHALLENGES



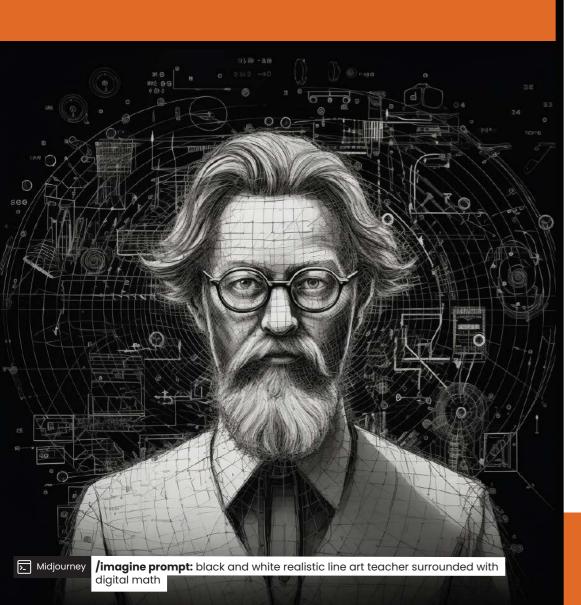
Max, 52 years old



Secondary school math teacher



Diekirch





/imagine prompt: black and white realistic line art I teach math to diverse learners like Alice, who loves math, and Liam, who struggles

I teach math to diverse learners like Alice, who loves math, and Liam, who struggles with it. I find it hard to keep them all interested and adequately support each of them.

I recently started to assemble and digitise math tasks in my digital library and tagged them by topic and difficulty. Whenever we start a new topic, I select fitting tasks and use an Al tool to generate variations of these. I then assign them to my pupils.

The tasks are **corrected automatically**, which saves me time. I can see how every pupil is doing. For example, I see that Alice has finished all tasks quickly. I will congratulate her and give her harder tasks.

I also see that Liam has many tasks left, and his results are wrong. I will load his approach into a generative Al tool to see where he lacks understanding. I will also send him an encouraging message and additional explanations. If he still has trouble, I will observe his problem-solving via the digital platform and send hints on the go.



/imagine prompt: black and white realistic line art of boy standing on books



I am glad to have tools that help me tailor and track my students' learning.





Al-generated practice problems and answers





Al-powered personalised teaching and learning for K-12









graphing, geometry, etc



### AI FOR BEST SEATING



Carole, 48 years old



Primary school teacher



Bettembourg



I believe that classroom management is essential for effective teaching and learnin Pupils should be comfortable in their environment and have a say in who they learn with. We usually experiment with different seating plans over the year, but finding the ideal place for everyone takes time.



Midjourney /im

/imagine prompt: black and white paper cut of a school

We are now testing an AI seating tool to help us create a **positive and** collaborative learning environment. My class uses an app to record everyones' well-being across the lessons.

I also indicate good or conflictual pairings.



paper cut craft diverse kid faces

The tool links this data with attendance and grades in our LMS. We ask the Al tool to suggest a seating plan based on the data it learned from everyone's input.

The students can also move their names around and see how well the system thinks this seat would help their well-being in class. The proposals encourage pupils who usually only exchange little to collaborate and learn from each other.

This AI-based tool helps us create a learning environment that respects each student's needs and preferences.







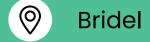


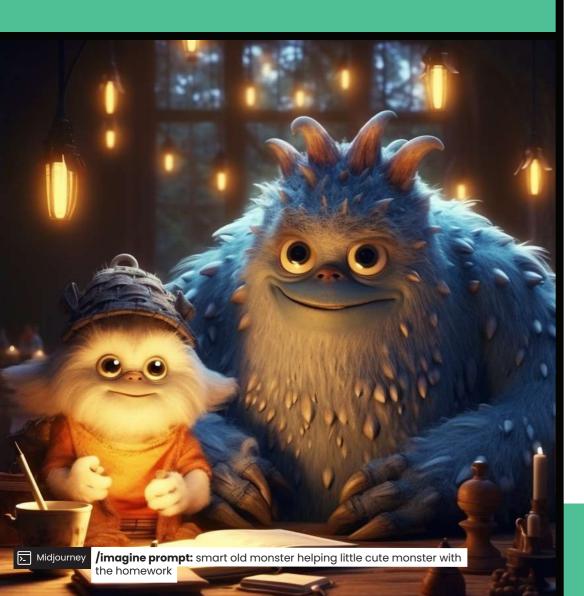


AI POWERED TUTORING & HOMEWORK











school is so hard these days. I have tons of homework, and need to learn a lot of things by myself. My parents can't help me much, because they don't speak French, German or Luxembourgish very well. They are also very busy, and they don't remember the stuff I'm learning. Some of my friends have tutors, but they are too expensive for us. I was feeling like I was falling behind and I hated it.

But then, our science teacher showed us some awesome AI tools that can help us with our homework and learning. They are like little teachers in my phone that can explain things to me in a way that I can understand. They also give me clues and tips when I don't know how to do my homework.

With these tools, I don't worry so much anymore. It's so cool that there is something that can help kids like me, especially when our parents can't.



These tools are like my secret superpower, they make learning easier and a little more fun.



/imagine prompt: cute little monster with a

schoolbag happy, smile, white background

**Useful tools** 



BRAINLY

Online platform for homework help





TutorAl

Learn by topic





**Interactive Mathematics** 

Step-by-step answers to math homework problems





Simplify complex topics and make them easy to understand

AI FOR ENGAGING EXAMS







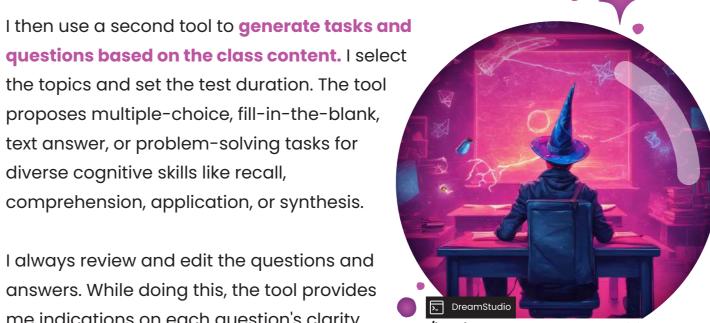


I am passionate about genetics, and I love making courses interactive. However, things become less exciting when it is exam time.

I have been playing around with Al tools to generate exams. I first use a tool to record and analyse my class content, such as lecture notes, slides, videos, and graphs from the lessons.

questions based on the class content. I select the topics and set the test duration. The tool proposes multiple-choice, fill-in-the-blank, text answer, or problem-solving tasks for diverse cognitive skills like recall, comprehension, application, or synthesis.

I always review and edit the questions and answers. While doing this, the tool provides me indications on each question's clarity, relevance, difficulty, and validity.



/imagine prompt: a young teacher sitting on a desk in a modern bright classroom he is wearing a wizard hat on the desk is a big book math symbols flying

I use a third tool to **visually format** and then deliver the test to my students. For online administration, I customise the test instructions and define time limits, anti-cheat randomisation, etc.

Finally, I use my second tool again to automatically mark the tests but I still double-check. The tool generates analytics on student and class performance, which help me identify areas for improvement.

These tools help me create better tests that match my teaching style and goals.



Into quizzes





Course authoring tool to create and share learning content





Generate quizzes, tests and exams from existing content





Create quizzes, tests, and automated assessments





Helps seamlessly administer and grade assessments



### AI FOR FOSTERING REVISIONS



#### Ben, 39 years old



Secondary school literature teacher



Kehlen





/imagine prompt: Tonight, I have to grade a stack of essays. As usual Sasha's handwriting is unreadable. I will try an Al tool I came across last week to transcribe handwriting into digital text. A quick photo of the essay.

Tonight, I have to grade a stack of essays. As usual, Sasha's handwriting is unreadable. I will try an Al tool to transcribe handwriting into digital text. A quick photo of the essay. Upload. Amazing, how accurate and fast that is. Now, I can read the essay on my screen.

Sasha's essay is interesting, but his spelling and grammar are terrible. Let me copy and paste the text into an Al-based correction tool. I really like the improvements it proposes. It still

takes me 10 minutes to review them, but it would have taken longer manually, and I would have probably overseen some.

Now, I can get to the core of the essay. He has good arguments but needs guidance on how to structure them. I am not good at turning critique into encouragement.

Maybe a text-generating AI may help. I ask a text-generating AI to generate feedback regarding the essay's strengths and weaknesses and to include tips based on my comments. I also prompt it to prioritise fostering over critique. The feedback sounds encouraging. I make some final edits and print the feedback and the revised essay for him.



/imagine prompt: teen at school table, happy, motivated, surrounded by books, and sparkles around him, warmer tint in the background



These AI tools are handy to speed up corrections and focus on high-value feedback.





Being able to decipher handwriting, expedite spell- and grammar checks, provide feedback that helps the learner progress

#### **Useful tools**



#### **READ COOP**

Text recognition and transcription





#### Feedback Fruits

Al-powered learning assistant for reviewing texts





#### AI to provide tailored feedback



#### grammarly

Al writing assistance for English





#### **Merci App**

Al writing assistance for French



AI FOR PERFECT EXPLANATIONS



Secondary school history teacher



T St In In IN THE PART AND 111111 /imagine prompt: casually-dressed 54 years old male teacher enthusiastically explaining to a class of pupils. cute style

I find history fascinating and try to get all my students to understand the basic concepts. Often, I see that some cannot follow my explanations, and I am trying to figure out why. I discovered that generative Al tools can help make my explanations better.

To start, I record or type my explanation. I ask the AI tool to evaluate my explanation on accuracy, clarity, coherence, relevance, and



/imagine prompt: schoolchild looks confused with question mark over head

engagement. The AI tool points out what students might not understand. I also feed it my students' questions and exam answers to identify further misconceptions or knowledge gaps.



/imagine prompt: teacher speaking into the microphone of a laptop

The AI tool can propose various ways to improve my explanations for the concerned age group. Building on multiple information sources, such as textbooks and educational videos or podcasts, it suggests suitable explanation formats such as stories, demonstrations, or experiments. I review and edit the explanations to fit my students' different levels. In the long run, I track which explanations work best.

This generative AI improves my teaching significantly because it makes my explanations clearer and more engaging for all my students.

**Key Issue** 



Pretest and hone the understandability of explanations and generate alternatives

#### **Useful tools**



Rephrase text with AI





Generate explanations





I'M FIVE Simplify complex topics and





#### Wolfram Alpha®

Al-generated practice problems and answers





Summarize web articles



AI FOR NAVIGATING STUDENT LIFE



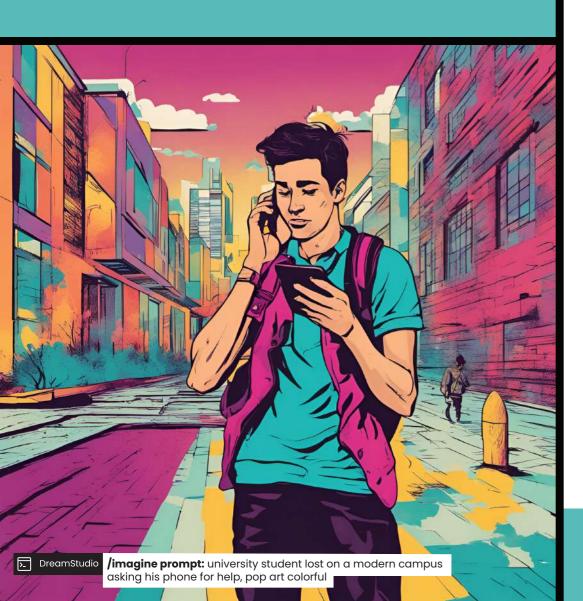
Rui, 19 years old



First-year Computer Science



Belval





When I arrived, the university immediately introduced me to ULAI - their AI assistant for questions related to my university life.

For example, my curriculum, assignments, grades or where to find a classroom. ULAI is connected to the university's databases and knows the answers to most of my questions.

A few days ago, I asked ULAI about the deadline for my statistics assignment. It told me it was due today by 5 pm. This afternoon, it reminded me to upload the assignment. It also gave me useful tips on the formatting.

Today, I asked for the library hours. It told me the library is open from 8 am to 8 pm on weekdays. It also **suggested a book club meeting** next week and offered to **enrol me**.

Sometimes, when ULAI cannot answer me, it redirects me to a staff member. For example, it did that for a grading issue. It also helped me book an appointment with the counselling service.



By answering my questions and giving me access to resources, ULAI makes my student life easier.















