

# Found in Translation

ASTEX revolutionizes language training with AI on IBM Cloud



Overview   Revamped student experience with AI   Faster language-

“Learn a new language, get a new soul,” claims a Czech proverb. While this may be too ethereal for some, learning a new language opens up new opportunities. For many professionals, English language skills are essential. Employees close deals, get promotions or score work abroad.



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Language-training school ASTEX, based in Madrid, Spain, has seen career after students completed its courses. “Corporate students come to us because companies need them to improve or update their English skills,” explains Uceda Márquez, Key Account Manager at ASTEX. “Many of our students in their daily jobs in English, interact with clients, adhere to new American requirements or prepare to expatriate to an English-speaking country.”

ASTEX students come from various industries and have a wide range of training from seeking intensive immersion to learning sales language around a specific set. First, students had to complete a written and spoken level test to evaluate language ability and class level. For the spoken portion, students then had a call with a teacher. On average, the level test was taking students 40–60 minutes.



## Time savings

Slashes average time needed for level test by 80% from 50 minutes to 10 minutes

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Next, students worked one-on-one with teachers to determine which class would be the best fit. This required teachers and students to coordinate and teachers had to remain updated on the extensive course catalog. Many students abandoned the program because the level test and course scheduler were too tedious and time-consuming. When a student chose a learning path, the content was static, with no option for customization. Data showed that only 10% of alumni were continuing to use the learning platform after completing a course.

ASTEX wanted to use AI to streamline students' onboarding experience, create personalized learning plans and improve the program's scalability by reducing dependence on humans. IBM Business Partner Ivory Soluciones connected ASTEX with IBM because of the tech company's expertise in AI solutions. Working closely, ASTEX, Ivory and IBM developed the ASTEX Language Innovation platform powered by [IBM Cloud®](#) with [IBM Watson®](#) technology.



“In this case, who better than us to apply AI to language

**Alfonso de la Torre**  
Director  
ASTEX

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# Revamped student experier with AI



To hone its vision for an enhanced learning platform, ASTEX collaborated with [IBM Garage™](#)—a framework for digital transformation—and participated in an IBM Enterprise Design Thinking® Workshop. “During the workshop, we were able to identify our students’ specific pain points, put them on paper and determine what student experience truly means,” explains Márquez.

Because the IBM Garage Methodology focuses on user-centered design, development and strategic scaling, ASTEX kept the student at the center of the decision and incorporated numerous points of view into workshop discussions.

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teachers, designers, developers and executives came together to discuss improve the ASTEX Language Innovation platform.

The team identified three minimum viable products (MVPs) that would have impact. First, create a shorter level test that could provide the same accurate student placement. Second, build an AI assistant that is available 24 hours for students. Third, offer a digital speaking practice in addition to the existing of reading, writing and listening.

During an architecture workshop, ASTEX decided to build the MVPs on IBM Cloud to control compute services expenses and speed deployment. Based on a hybrid microservices-based and Platform as a Service (PaaS) architecture, the system has scalability and resilience and allows ASTEX to independently manage and deploy each MVP without affecting the entire system.

With IBM Watson technology as the AI backbone for the three MVPs, data scientists used [IBM Watson Studio](#) with Auto AI to create, manage and deploy efficient models. [IBM Watson Machine Learning](#) to run the models.



## Faster language-level evaluation

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ASTEX, Ivory and IBM delivered the first MVP in only eight weeks and the second and third MVPs over the next two months. ASTEX developers learned a new programming language and adopted lean, agile ways of working. The team used extreme programming techniques to remove technical debt and change solution features. Agile ceremonies such as weekly iterations, retrospectives and iteration planning meetings helped the team gather feedback from stakeholders and update the solutions as needed.

As a result of the first MVP, the time needed for a student to take a level test has been slashed from an average of 50 minutes to 10 minutes, an 80% improvement. [IBM Watson Natural Language Understanding](#) can process students' spoken and written test answers by extracting and analyzing phrase properties such as number of verbs and nouns.

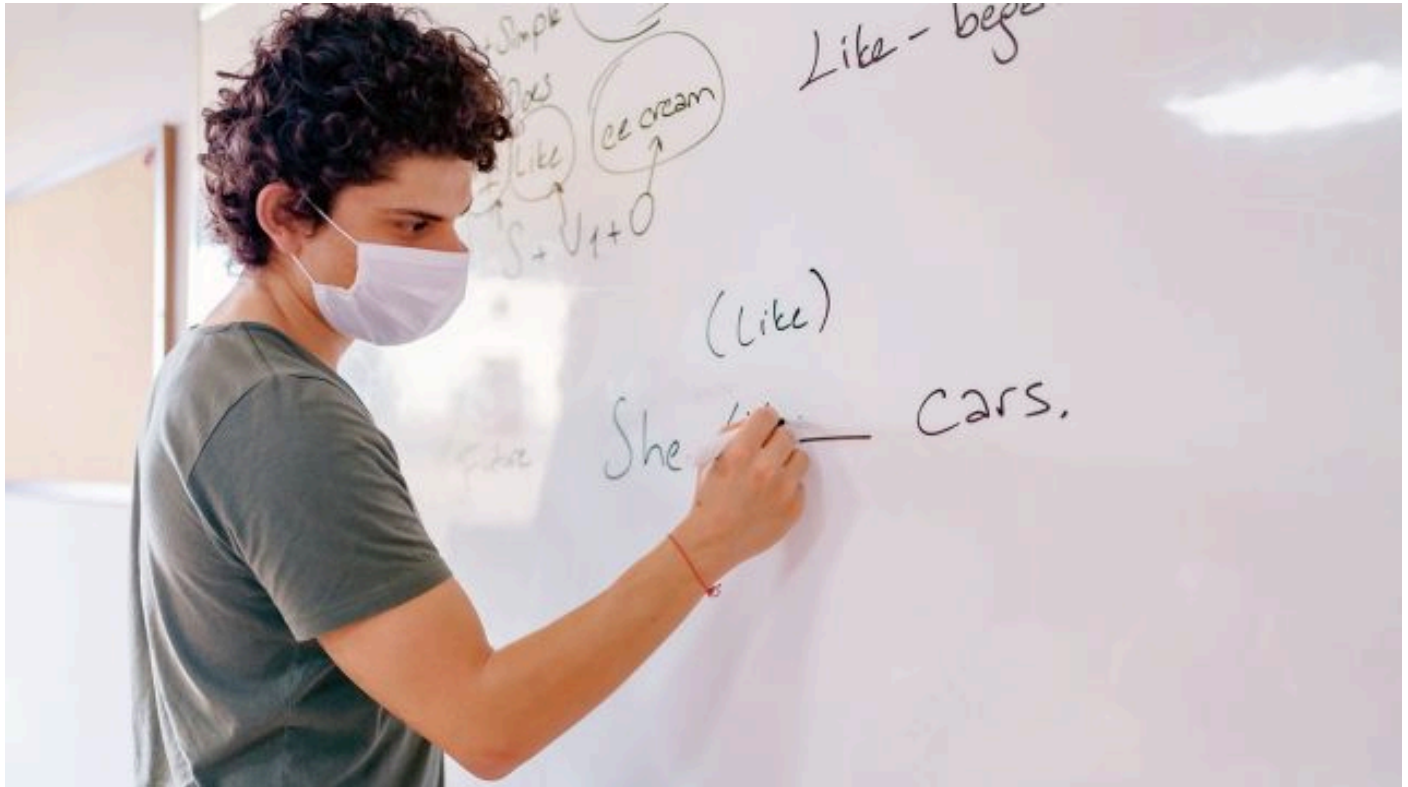
The second MVP, ASTEX Language Intelligence (Ali), is a digital assistant that accompanies students throughout their ASTEX learning experience. Ali helps onboard students and assists in placing them in the right class because it asks up front what the student's job is, why they are studying English and how much time they have to devote to language training. The system can interact in a human-like way, helping students express themselves naturally.

Ali also assists with administrative tasks such as canceling a class and finding ways to boost a grade. It provides students with feedback on their progress and can suggest areas of improvement. Ali uses [IBM Watson Discovery](#) to recommend exercises that fit with a student's interests and learning path. For example, if a student has expressed an interest in traveling, Ali will customize that student's coursework with exercises involving travel so that the content is more engaging. Ali is available to students 24 hours a day, seven days a week.

The third MVP, the digital speaking practice, uses [IBM watsonx Assistant](#), [IBM Watson Speech to Text](#) and [IBM Watson Text to Speech](#) solutions to help teachers create written or spoken dialogs that vary in complexity based on a student's needs. This digital tutor and oral language practice are available to students around the clock through a virtual tool or over the telephone.

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Because ASTEX team members had such a positive experience with user-centered design, they decided to apply this approach to the ASTEX Language Innovation platform interface as well. Teachers and students gave input on the application's design and organization, while IBM and ASTEX confidently made changes knowing that they wouldn't break any other parts of the containerized architecture. The updated design is clearer and more intuitive for users, enabling them to access information and find resources more easily.



## E-learning like no one else

User feedback on the improved ASTEX Language Innovation platform has been unanimously positive. Although the core program is the same, the updates seamlessly integrate with the existing system and elevate the entire experience. The platform is more dynamic, with a customized plan for each student. This optimization increases user engagement and improves outcomes.

The learning platform's AI-driven components are revolutionary. "No one else in the language-training industry offers digital speaking practice like this," explains Márquez. "The assistant Ali is also a differentiator because people have become used to chatbots, but it is a shocking difference to actually be able to have this kind of interaction with a machine." Because of her machine-learning capabilities, Ali will continue to become even more intelligent with every input. Further, since technology automates simple tasks, teachers can focus on more complicated tasks—and teaching.

ASTEX is now able to easily scale its platform, which Ivory and IBM plan to help evolve. "At ASTEX we have always been clear that being at the forefront of technology and

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pedagogical innovation is key to maintaining ourselves as a benchmark in the sector, and that is why we rely on the best and invest heavily in constant evolution,” explains Alfonso de la Torre, Director of ASTEX. “In this case, who better than IBM to accompany us to apply Artificial Intelligence to language training?”

Ready to see what IBM Garage can do for your business? [Talk to an IBM Garage expert.](#)



## About ASTEX

Founded in 1986, [ASTEX](#) (link resides outside of ibm.com) provides language training services to corporate students across all industries. The language school is based in Madrid, Spain, and has an annual revenue of approximately EUR 30 million.

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# About Ivory Soluciones

IBM Business Partner [Ivory Soluciones](#) (link resides outside of ibm.com) is headquartered in La Coruña, Spain. Founded in 2007, the company specializes in IT consulting, web development and digital transformation.

## Solution components

<a href="#">IBM Cloud®</a>	<a href="#">→</a>	<a href="#">IBM Garage™</a>	<a href="#">→</a>	<a href="#">IBM Watson®</a>	<a href="#">→</a>
<a href="#">IBM watsonx Assistant</a>	<a href="#">→</a>	<a href="#">IBM Watson Machine Learning</a>	<a href="#">→</a>	<a href="#">IBM Watson Natural Language Understanding</a>	<a href="#">→</a>
<a href="#">IBM Watson Speech to Text</a>	<a href="#">→</a>	<a href="#">IBM Watson Studio</a>	<a href="#">→</a>	<a href="#">IBM Watson Discovery</a>	<a href="#">→</a>
<a href="#">IBM Watson Text to Speech</a>	<a href="#">→</a>				

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