



# LEPOLE

## EVOLUTION OF EDTECH BUSINESS MODELS

Prospective monitoring  
March 2023



# Summary of the march 2023 edition



## Definition of Edtechs



## Methodology



## Trends Analysis



**NowEdge** is a tool for optimising the learning process. It is based on gamification with the implementation of "serious games".



**Blackboard** is an online platform providing several solutions to increase the digitalisation of a school.



**ARI 9000** is a learning platform that uses machine learning and artificial intelligence to provide individualised teaching.



**Alta** is a courseware that proposes the setting up of a complete course. The aim is to personalise the level of learning according to the learners' responses.



**Kestya** is a communication tool that answers students' questions using artificial intelligence.



## Definition of Edtech :

The acronym EdTech is short for Educational Technology. **EdTech represents the use of new technologies to facilitate and improve knowledge learning and transmission.**

For example, e-learning provides individual digital teaching instead as an alternative to physically attending classrooms. These "classrooms" and MOOCs (Massive Open Online Courses) are lectures broadcast on the Internet. The LMS (Learning Management System) makes it possible to distribute educational content online, including course. There are also educational robots that capture the attention of young people and support them in their learning.

EdTech provides tailor-made and on-demand services. It revolutionises teaching, making it possible to **design a personalised learning path for students.**

Teachers and schools in general also benefit from these technologies, which facilitate the sharing of knowledge in collaboration with their students through participatory and pedagogical teaching. In addition, they use these technologies as **online platforms to better organize, control and monitor learning and adapt their teachings to students.** This allows them to provide more relevant and effective services.

Overall, Edtech benefits students and teachers as well as schools by **facilitating administration and communication.** They improve dialogue, education, learning and above all pedagogy.

**DISCOVER MONITORING METHODOLOGY**



# Prospective monitoring - Definition



## Overview

Prospective monitoring consists of collecting strategic information in order to anticipate changes in the ecosystem and respond as quickly and appropriately as possible. Prospective monitoring provides support for the implementation of a commercial and technological strategy.

## Methodology

An effective method involves regular monitoring and service developments monitoring. The below steps were taken to carry out the monitoring and illustrate the results :

- Research, analysis and comparison of a dozen innovative offers in the field of Edtech.
- Identification and understanding of the commercial and technological benefits of these results.
- Identification of Edtech trends and innovations. Trends represent market characteristics and developments.

## Objectives

For a company or educational institution to compete sustainably competitive it needs to be constantly aware of changes in its market, in order to either limit potential risks or benefit from these changes. This would involve the following :

- Monitor competitive products and service developments.
- Identify and distinguish innovative trends and strategies over the long term.
- Analyse and compare this information with the organisation's current strategy.
- Evaluate competition and their business strategies through their innovations.
- Carry out a self-evaluation and develop a strategy.
- Find inspiration in business and technological trends.

**DISCOVER EDTECH TRENDS ANALYSIS**



# Edtech trend analysis



## Main technological trends

Represent **opportunities or threats** for the various players in the sector



Gamification



Artificial intelligence



Big Data



VR



Publication of the rapport  
"Raising the Bar on Edtech Advertising"

The *Advertising Standards Council of India (ASCI)* has published a comprehensive report on advertising in the education technology (EdTech) sector and its impact on parents and students, specifically in the Indian market. The study found that advertising plays an important role in the decision-making process of parents when choosing an EdTech platform. The study reveals that 49% of parents base their choice of platform on advertising.

## Major developments



Indian EdTech has raised USD 17 million. This comes as B2C online edtech startups in India have suffered after the pandemic with a drop in demand.



Building on 22 years of experience, Swiss edtech company Avallain is entering its second round of funding with a **EUR 8 million** raise.



The learning platform raises **USD 22.5 million** to provide online learning programs for middle and low income families.



Oslo-based platform Ludenso raised **USD 1 million** in a seed funding round.



NowEdge is a tool for optimising the learning process. It is based on gamification with the use of what NowEdge calls "serious games" to stimulate learners.

### Type

Educational and fun tool based on gamification.

### Competitive advantage

NowEdge gives the possibility to set up a learning path to increase learners involvement.

### Price

The Learning Management System (LMS) is free if the number of users does not exceed 10. The product is created by a Moroccan company which offers a flat fee of MAD 49 (CHF 4.4) per month per user. A preferential rate is available for schools. NowEdge also provides "serious games" which represent an additional MAD 350 (CHF 31) per participant for the "strategic warfare" mode and MAD 1,500 (CHF 133) for the "trading" mode.

### Number of users

According to the website, NowEdge has over 700 users with a 95% satisfaction rate. ESSEM Business School and Rabat Business School are cited as using the tool. The majority of users are Moroccan.

### Level of development

NowEdge is a start-up founded in 2020 in Casablanca, Morocco. It is supported by Technopark, an acceleration and development company for young companies. In December 2022, NowEdge won the Innovation Award at the Phare Entrepreneurship Awards organised by ACCEDE International.

**Link** <https://www.nowedge.io/>



### How does it work?

The solution offers two types of service. Firstly, a learning management system which translates into a dashboard to monitor the progress of students. Nowedge also offers "serious games" on specific themes. The start-up can also offer customised games. However, we have not found any information on the price of this type of service.



## Features :

- The solution proposes to **set up "Serious Games"**, this type of learning can be done in teams or individually. It is also possible to create customised games to meet the needs of teachers and institutions.
- The **learning management system makes it possible to create an entire course** composed of different stages with documents, concepts, quizzes, questions and exams. It is also possible to use different types of media: the course can consist in videos, articles, internet links...
- A dashboard is available for learners with an **experience system**. It is possible to compare their progress with the rest of the class.
- **The application is easy to deploy**, there is no need to install any software, all you need is a computer and an internet connection. Moreover, the solution is turnkey and does not require any configuration by the teachers.
- It is possible **to watch the different progresses and performances** of the students. In particular, the results of assessments and quizzes.
- A **forum is set up to facilitate communication** between teachers and students.



Kindergarten	★★★	High School	★☆☆
Elementary School	★★★	University & school	★★★★



Schools are often criticised for being too academic and not practical enough. This is even truer at university, where many students end up dropping out. NowEdge tries to stimulate learners with "serious games", but also to promote a new learning system, which brings many advantages :

- The implementation of serious games is a real asset to **increase student involvement**. It also allows the development of other types of skills such as **soft skills**, which are increasingly in demand in companies. For the moment, NowEdge only offers a few "serious games". However, it is possible to set up fully customised games to meet the expectations of the course, but also those of the teacher.
- The provision of a forum **improves the exchange between the teacher and the learners**. It is sometimes easier to ask a question in writing rather than orally, especially in lecture theatres. It also allows the teacher to put forward links or documents without having to send emails.
- The variation in the type of material is one of the strengths of this solution. The proposal of "classic" course documents, videos, links and quizzes helps to **maintain attention and thus limit the risks of dropping out**. Similarly, the use of experience points and the grading system can **increase student engagement**.
- It is possible **to see the level of progress of a class** thanks to the Dashboard. It is also possible to see how many students have read the documents, and which points need to be studied in greater depth according to the results of the quiz.
- The **ease of use of the tool** means that it can reach a large number of teachers, even those who are not very comfortable with this type of technology.



However, there is room for improvement:

- It is a shame that Nowedge does not offer more variety in terms of "serious games". Currently, they are **very business school oriented** with only 2-3 games offered. It is possible to customise them, but no information is given in terms of cost and time.
- The use of this tool **represents a significant cost for the teacher**. Indeed, in order for the teacher to be as efficient as possible, it seems appropriate to put in place several supports. This is a process that can be very time consuming.





Blackboard is an online platform that provides several solutions to increase the digitalisation of a school.

### Type

A management learning system (LMS) that digitises the learning of learners.

### Avantage compétitif

The platform offers several time-saving solutions for teachers as well as for students.

### Price

The price varies according to the needs and size of the institution. According to TechnologieEvaluation, the licence for a single class costs USD 300 (CHF 278) per year, with a maximum of 100 participants. The licence for an entire department costs USD 9'000 (CHF 8'324) per year, with a maximum of 500 participants.

### Number of users

According to the Fool's website, Blackboard offers its services to more than 100 million users, many of whom reside in the United States.

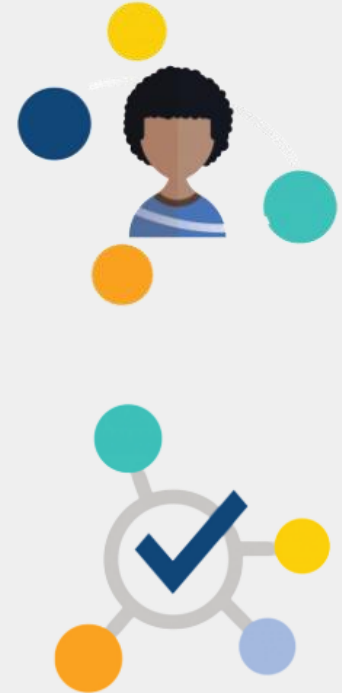
### Level of development

According to LinkedIn, the start-up employs between 1,000 and 5,000 people. The company is a pioneer in the digitalisation of learning models, having been founded in 1997.

### How does it work ?

The platform offers several solutions that can facilitate the management of a school :

- Blackboard Learn centralises information (documents, notes, discussions, etc.).
- Blackboard Collaborate is a tool that allows video conferencing.
- Blackboard Analytics analyses data.
- Blackboard Ally aims to make digital courses more accessible.





## Features :

- The platform is available on **several types of media** : web page, smartphone and tablet.
- It is possible to set up **discussion forums** around an issue or a document.
- The solution **centralises all documents** related to school life, but also all exercises and documents made available by teachers. This simplifies the storage and sharing of information.
- Blackboard Collaborate is a solution that **creates videoconferences** for a class. It has **valuable features** such as the ability to record and provide a "whiteboard" to make the course more interactive. Many other features are available to facilitate interaction and understanding of online courses.
- The collection of extensive data allows for **learning analytics**, which make it possible to identify struggling students, identify barriers to course progress, and track the impact of teaching methods on different student audiences over time.
- Blackboard Ally **builds a more inclusive learning environment and enhances the learning experience for people in precarious situations** by providing alternative course formats and enabling feedback...



Kindergarten	★★★	High School	★☆☆
Elementary School	★★★	University & school	★★★★



The Covid19 pandemic has enabled schools, but also teachers and students, to accelerate the digitalisation process. It is becoming more and more complicated for a school not to offer digital tools. Blackboard has many advantages for developing modern solutions :

- One of the main features of this platform is the **ability to aggregate all content on a single interface**. Indeed, in most schools, documents are sometimes online, sent by email, by the administration... Getting all documents centralised on a single platform **saves time for teachers** who can easily share and store class documents, but also for the administration. Also for students, documents are more easily accessible which leads to more engagement.
- The **video conferencing system has many features specifically designed for online classes**. A good example is the use of a board to make diagrams during presentations. This type of tool is also a **good alternative** to Teams, Zoom and Google Meet which are currently the leaders in this sector.
- The setting up of a **forum dedicated to certain courses or subjects** is a real asset. Indeed, this **allows for a better exchange between teachers and students**. In addition, even the least comfortable students can ask questions without the pressure of expressing themselves out loud.
- The analysis of data to better understand student learning is an advantage that schools can use to their advantage. Furthermore, if students in difficulty are identified early, then the **risk of dropping out is reduced**. It is also possible to measure a teaching method over time to see the impact of the method.
- Blackboard Ally provides various tools to facilitate learning for students, even those in precarious situations. This type of service shows a real desire on the part of an institution to improve the equality of opportunity for each student. This can help to increase the institution's influence.

However, two points should be kept in mind :

- After reading several comments, the platform can be **complicated to use for people who have difficulties with the use of digital tools**.
- On the same analyses, but also with videos, it would seem that **the tool does not work properly from time to time**. If an institution relies solely on this solution, and it becomes unusable, even if only for a day, the situation would cause many problems.





## ARI 9000: the Aristotle of modern times



ARI 9000 is a learning platform created by the company MagmaLearning, which uses machine learning and artificial intelligence to become a personalized tutor and change the way people learn.

### Type

Learning platform based on artificial intelligence and machine learning.

### Competitive advantage

A solution that stimulates learners by offering different exercises according to their abilities.

### Price

No relevant information was found on this subject. According to an [interview](#) with the founder, the business model is based on a subscription system.

### Number of users

No information was found. However, ARI 9000 is used at EPFL and EHL.

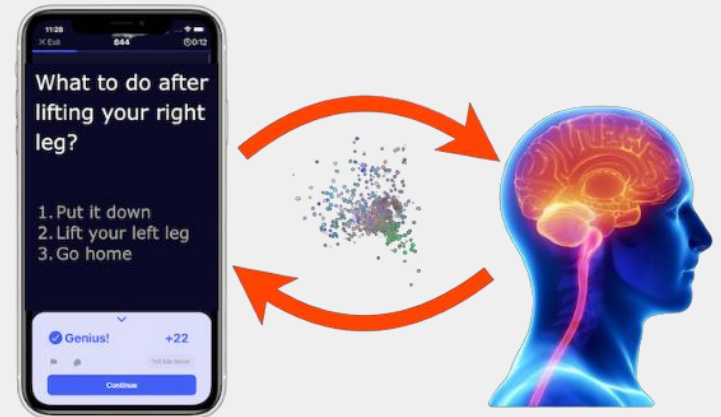
### Level of development

The startup is founded in 2019 in Lausanne, Switzerland. It was awarded a grant of CHF 20,000 from the Foundation for Technological Innovation (Fit) in 2020. According to their LinkedIn page, the startup has between 11 and 50 employees.

### How does it work ?

ARI 9000 works with the machine learning system. In order to be effective, the school or teacher must send a certain amount of documents in different forms. After that, it takes an average of 2 weeks for the solution to be usable. Students can then start learning with ARI 9000, which adapts to the student's level.

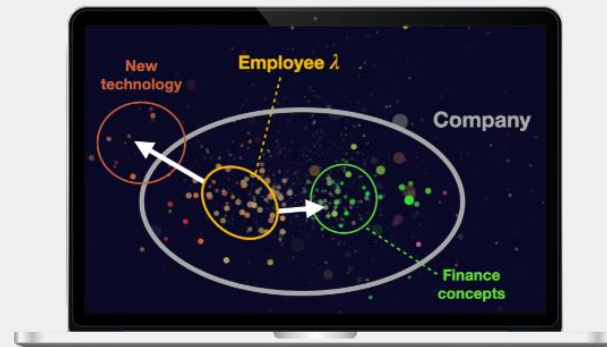
**Link** <https://www.magmalearning.com/>





### Features :

- The solution can **generate content from very different documents** (Word, PDF, PowerPoint...), but also with various themes.
- Each content proposed by ARI is worked by an artificial intelligence that **adapts the content according to the person** using the platform. Many characteristics are taken into account.
- The solution offers an **atypical visualization mode** with a constellation of 3D points as the main visual. Self-organization emerges spontaneously, in which close points correspond to related key concepts. As the amount of knowledge increases, the number of dots and colors becomes more dense.
- Artificial intelligence **provides continuous feedback** to encourage learning.
- It is possible to **lead students to new concepts** and follow logical paths to enable better understanding.
- The solution **provides different quizzes based on the time available** (micro-learning).



Kindergarten	★★★	High School	★★★
Elementary School	★★★	University & school	★★★

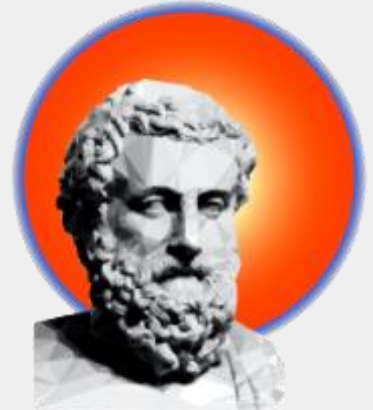


Each learner has different abilities and desires, which is why a very vertical education system cannot suit all students. Based on this observation, ARI 9000 tries to use artificial intelligence to solve this problem :

- One of the strengths of using machine learning is the ability to **create exercises on very different topics**. It is therefore possible to use ARI 9000 for all the courses offered in a school. In addition, the technology can be easily accepted if a small group of teachers are already using it, so that they can give advice to the most reluctant teachers.
- The implementation of this platform **does not involve any additional cost in terms of time for the teachers**. Indeed, it is enough to collect the courses of the past years or those already prepared. A delay of 2 weeks is required to make the tool operational, which seems more than reasonable, as the programs are prepared months in advance.
- The most important advantage is the **customization of the solution for each user**. ARI 9000 takes into account the level of knowledge on the topics, but also the memory capacity of each individual with a repetition of several words so that it enters the long-term memory. According to the CEO of MagmaLearning, academic results can be improved by 20% to 30% depending on usage (exam experience).
- **The solution is available on multiple platforms** with a web version where anyone can log in and an app available on Android or iPhone. This allows for better student adoption, but also makes it easier to use in many situations (classroom, transportation, home).
- The artificial intelligence **sends regular motivational messages to stimulate learners** and encourage them to use the tool. In addition, the color constellation allows to show in a very visual way the level of learning achieved.

Despite the undeniable advantages, the solution can be improved :

- According to the startup's founder, it takes an average of **20 to 50 quizzes for the platform to start adapting to the user**. This may not seem like much in absolute terms, but it is enough to make learners give up using it.



Alta is a courseware that proposes the implementation of a complete course. The objective is to be able to personalize the level of learning according to the learners' responses.

## Type

Adaptive teaching software based on the level of understanding of the learners.

## Competitive advantage

The solution not only saves time for teachers, but also allows for a better adaptation of the course according to the students' level of understanding.

## Price

Knewton offers a USD 9.95 (CHF 9.15) per month per course subscription for each student, a USD 39.95 (CHF 36.70) per term per course subscription, and an AltaPass offer that is good for two years with the ability to attend all courses for USD 79.95 (CHF 73.60).

## Number of users

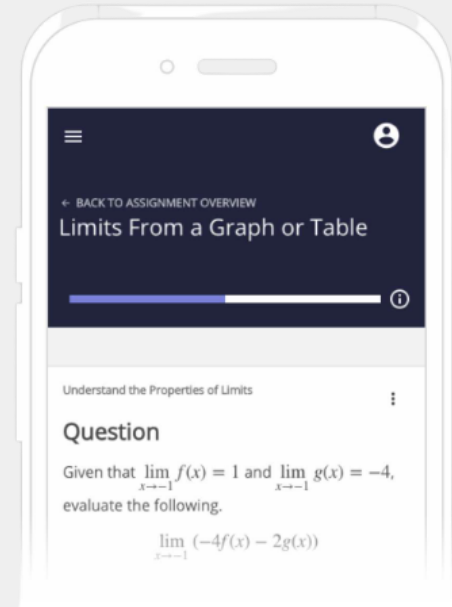
According to the Knewton site, over 40 million students worldwide have used the Alta platform and tool. A large portion of these are in the United States.

## Level of development

Knewton was founded in 2008 by Jose Ferreira, a former Kaplan executive. Its headquarters are located in Manhattan, New York. The company also has an office in Tech City, London. It currently has over 150 employees.

## How does it work ?

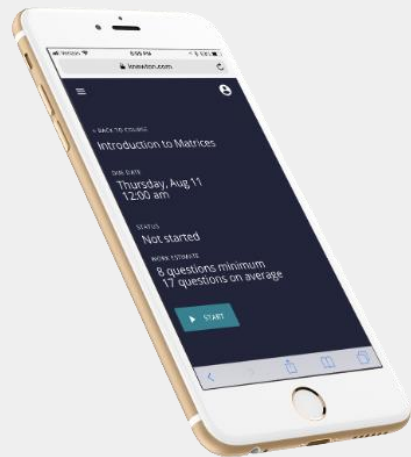
The solution provides the entire course divided into several parts. A theoretical part where the learner has to retain the concepts, a quizz/exercise part in order to know the level of understanding and finally an exam part. The particularity of this tool is to be able to correct directly the detected mistakes, but also to adapt the course according to the level of understanding and learning of the learners.





## Features :

- The solution offers an entire course with **different types of formats** such as videos, texts, exercises, audio...
- Learners can **progress through the course at their own pace** with the possibility of going back over each exercise and each notion. In addition, Alta takes into account the students' answers in order to **personalize learning**.
- It is possible to know all the answers to the different quizzes, but above all to **obtain all the explanations** in an exhaustive way.
- The exams that evaluate the students' understanding and give grades **are done automatically**.
- The **solution is multiplatform**, it can be used on a smartphone, a tablet or a computer.
- The teacher **can monitor the overall progress of the class** with the precise number of quizzes and concepts seen by each learner.
- A **large number of courses are available**, but are still focused on scientific subjects (Chemistry, Biology, Physics...)
- Alta **adapts to the "Learning Management System (LMS)" already in place**, which allows a greater capacity of adoption. The most cited example is its ease of integration into the Canva LMS which is widely used in the United States.



Kindergarten	★★★	High School	★☆☆
Elementary School	★★★	University & school	★★★★



Alta, the solution proposed by Knewton is a tool that creates a course for teachers by proposing different formats. Its main objective is to propose an adaptive module according to the level of understanding and knowledge of each student. This tool offers many positive aspects for teachers and schools.

- The solution allows to offer an already operational course for the teachers, **which saves a considerable amount of time** that they can use to make the course much more interactive (setting up of hackathon, group project...). It is always possible to complete Alta with their own documents and presentations.
- The greatest strength of this tool is the **ability to adapt to learners of all levels**. In this way, students with a high level of learning ability do not have to listen to the teacher's explanations several times. On the other hand, students with difficulties can progress at their own pace by understanding their mistakes thanks to the different explanations.
- The availability of various statistics to **observe the progress of each student in the program** is a real advantage. The teacher will no longer have to wonder if the articles or documents have been read during the class sessions. In addition, **it is possible to identify dropouts and try to help them**.
- The implementation of automatic grading **again saves time for the teachers**. It also **removes the subjective part** of grading that some students blame on teachers. In addition, with the various statistics, **it is possible to better understand the types of exam failures**. If a student does not score well, but did not finish reading all of the concepts and take all of the quizzes, it seems logical.
- Although it has the advantages listed, the solution has some limitations :
- The solution is **quite rigid in terms of possible questions**. Indeed, the lessons are already prepared and it seems complicated to make changes. It is **also the same for the answers**, the learner has to give the ones expected by Alta, otherwise they are counted as wrong. With a teacher, the answer could have been right.
- Alta can also **limit students creativity and thinking**. By taking quizzes with specific answers, students can "format their answers" to get the best possible score. It seems wise to set up parallel written exams with the objective of evaluating the student's analysis, which ultimately increases the amount of work for teachers and learners
- Unfortunately, Alta **only offers science subjects**. However, it seems much more complicated to evaluate more subjective subjects because of the methodology used (evaluating philosophy is still too complex a task for a robot).





Kestya is a communication tool that answers learners' questions using artificial intelligence.

## Type

Chatbot that answers learners' questions using artificial intelligence.

## Competitive advantage

Allows you to be more efficient in answering questions.

## Price

Pricing not available.

## Number of users

No relevant information was found on this subject. However, the website highlights partners such as Rennes School Of Business, Ipac Bachelor Factory or IHECF.

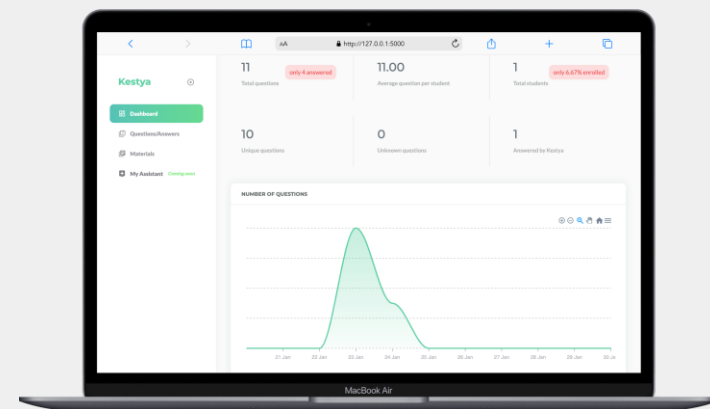
## Level of development

Kestya is a start-up founded in 2021 in Rennes, France that currently has between 2 and 10 employees. The level of development seems quite advanced considering the interface and the possible connectivity with other tools.

## How does it work ?

Kestya is an online platform that allows teachers and administrators to give their students a way to ask questions anonymously and without any constraints, before or after class. And thanks to artificial intelligence algorithms, the teacher can train the system to answer learners automatically.

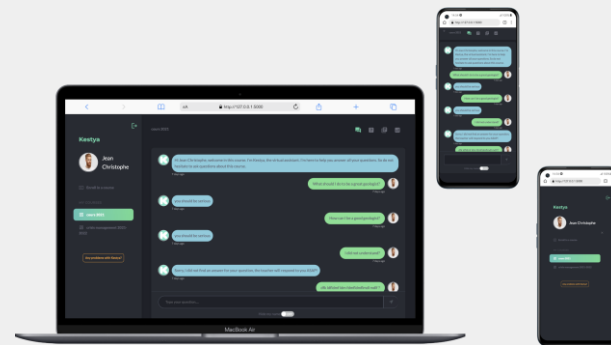
**Link** <https://kestya.com/>





## Features :

- The main function of Kestya is to be **able to answer the questions asked by the students for the teacher**. The artificial intelligence takes note of the teacher's answers, then with time and by accumulating data, it becomes completely autonomous.
- This tool is not only for teachers, but can also be used by **all school departments**, especially the administrative part.
- The solution offers an **integration with the systems already present in the school**. A module can be directly integrated into moodle, WhatsApp or Teams.
- The platform is available on several media, which allows **diversifying the means of communication**.
- All questions and **answers are centralized in a smart FAQ** to make the questions already asked accessible to all learners.
- Kestya is **available continuously without interruption**, allowing students to ask a question at any time and receive an answer almost instantly.
- **Only learners with an account can ask questions**, which limits the number of users.



Kindergarten ★★☆☆

High School ★★☆☆

Elementary School ★★☆☆

University & school ★★☆☆



School administrations and teachers are often overwhelmed by many questions, this phenomenon is even more intense during certain periods of the year: before exams, the start of the school year ... For this reason, Kestya responds perfectly to certain problems :

- Teachers have little time to offer quality teaching, especially when you compare the number of teachers to the number of students, and this trend seems to be getting worse over the years. The implementation of Kestya **saves a lot of time** in answering redundant questions. This is also true for the administration, which receives a large number of requests at the beginning and end of each quarter. The questions asked are generally similar, which leaves more time to answer more urgent issues.
- Students will be able to get **instant answers to their questions**, which leads to **more engagement and better results**. Also, since the only questions that will be sent to faculty and administration will be the most specific ones, the response should be much faster. The chatbot acts as a first filter that sorts the requests.
- The ability to **use Kestya across multiple channels** (Teams, Moodle, WhatsApp) is a significant advantage. In addition, it is possible to ask a question regardless of the time or date (school vacations). These advantages help to **reassure students** who can feel more in tune if the answers are quick.
- The smartFAQ system allows to **centralize all the questions** asked in order to know directly the answer to the questions. This saves time and potentially reduces stress.

This tool is also a strength for students who are afraid to speak up in class or be judged by sending an email. Indeed, the questions asked are **based on a system of anonymity**.

Nevertheless, this solution has some limitations :

- While the implementation of this tool is a long-term investment and saves time, it also represents a **short-term cost** (in order to "train the tool") for teachers and members of the administration. This additional cost can be difficult to accept, especially if the person does not see the value of this type of tool.
- The solution uses artificial intelligence to detect the type of questions and then gives the answer that the teacher has already written. This means that for every new topic, the teacher has to **create new answers**, so the artificial intelligence is only slightly adaptive.
- Always having an artificial intelligence as the first contact can also be confusing for learners who may **feel a greater distance** between themselves and the institutions staff.

