







EVOLUTION OF EDTECH BUSINESS MODELS

PROSPECTIVE MONITORING
June 2019











Edtech definition



Monitoring Methodology



Analysis of trends



Edtech market trends evolution

Summary of the June 2019 edition

woodap

Woodap offers the opportunity for teachers to ask different types of questions and to collect feedback from students instantly. The app promotes learning through student engagement and participation.



Kinems is an innovative educational platform designed to help students with multiple learning disabilities such as autism and dyspraxia to achieve their goals and skills. The platform develops personalized learning games using the Kinect virtual reality system for Microsoft's console Xbox360.



BCDiploma

BCDiploma is a Web application based on blockchain technology allowing schools and academic institutions to certify the diplomas they issue.

PLAY2SPEAK

Play2speak offers a solution to learn English in an immersive and fun environment. Using virtual reality and artificial intelligence, the start-up offers a scenario in which students are able to converse in English with virtual characters.

CLANED

Claned is an online and mobile learning tool, which creates a learning space for each learner. Within that space they study, collaborate and find material matching their individual need. Claned applies artificial intelligence and learning research, revealing what factors impact individual learning.



EXAMPLE OF PROSPECTIVE MONITORING



DEFINITION OF EDTECHS:

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 training instead of physically attending classrooms. The "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 the possibility of offering a complete course. There are also educational robots that accompany young people in their learning by capturing their attention.

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

Teachers and schools in general also benefit from these technologies to facilitate the transmission 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





DEFINITION OF PROSPECTIVE MONITORING



OVERVIEW

Prospective monitoring consists of implementing a systematic monitoring process of the environment in order to identify weak and mature signals which are indicators of change. It is a question of collecting strategic information to be able to anticipate changes in the ecosystem in order to respond as soon as possible and adequately. Prospective monitoring provides support for the implementation of a commercial and technological strategy.

METHODOLOGY

An effective method is to conduct products 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 technologies
- Identification of Edtech trends and innovations. Trends represent market characteristics and developments.

OBJECTIVES

A company or an educational institution which wants to be sustainably competitive must constantly be aware of changes in its market in order to limit risks or benefit from these changes.

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

DISCOVER EDTECH TRENDS ANALYSIS



Edtech Trends Analysis



More and more schools are using innovative technologies to **improve their performance**. Edtechs' technologies bring **new ways of teaching and experiencing school** for both students and parents as well as for **teachers**. All of these technologies share a common denominator: **increase student participation to help teaching and learning**. The aim is to transform a student's possible passive attitude in their studies into an active one. That is why **Wooclap**, a digital platform, offers the opportunity for teachers to ask different types of questions and instantly collect feedback from students during classes.

In particular, there are two main ways that Edtechs' technologies to boost student participation in learning:

- **Gamification** consists in using the **mechanisms of the game** in a **learning logic**. While having fun, the student remains focused, motivated and mobilized in his learning. For example, **Play2speak** teaches English by allowing students to exchange with virtual characters in a defined scenario by using virtual reality and artificial intelligence.
- **Personalization of the content** also encourages engagement. Students have different levels and needs. Adapting the content to each student helps to **maintain a constant and lasting commitment**. As such, **Kinems** developed **personalized learning games** using the **Kinect** virtual reality system for Microsoft's console Xbox360. The aim is to help students with **different learning disabilities** achieve goals and skills. **Claned**, a cloud-based platform, also allows content customization by improving the students' learning according to their ways of understanding.

Fear of making mistakes is one of the **main obstacles** to student engagement. Through **gamification and personalization** of content, Edtechs' technologies are able to **limit this phenomenon**.

Moreover, adopting Edtechs reinforces the school's "innovative" image by offering this type of technology. This is the adopted hypothesis by **BCDiploma**. It is a Web application based on **Blockchain technology** which allows schools and academic institutions to **certify the diplomas** they issue.

DISCOVER EDTECH MARKET TRENDS

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2019-2020 EDTECH MARKET TRENDS **EVOLUTION**

Strong economic growth in the market characterized by Sino-American hegemony



World market value of Edtechs:

USD 8.3 billions in 2018 USD 4.7 billions in 2017 USD 3.5 billions in 2016



Chinese investments x4 between 2016 and 2018 French investments x4 between 2017 and 2018: USD 246 million



Chinese 2020 target: USD 30 billion



Higher education and K12 (cycle and college) represent the majority of Edtech investments followed by training.

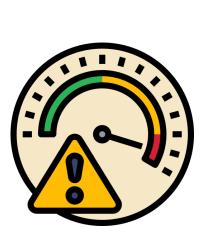
2018 distribution of the global Edtechs market:



55% 23% China **USA**



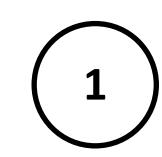
10 % Europe



Uncertainty over tensions between the U.S. and China could undermine global merger and acquisition deals in the Edtech market.

China's data privacy and surveillance policies have raised questions over foreign users data protection.

Teachers' key demands for Edtech technologies in 2019



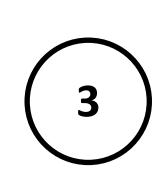
Help teachers meet learning objectives

The technology must support the main goal that is to get students to meet standard objectives. Technologies have to improve learning and teaching methods to support students.



Facilitate instruction by diversifying the learning process, experience and increasing engagement

Technologies bring diversification of the teaching. They assist teachers in reaching reluctant learners and enhance lessons with ludic and diverse learning processes, for example.



Duration of implementation and time-saving

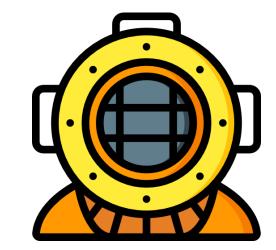
Teachers do not have time on their working hours to test and implement the use of new technological tool. They generally have to do it on their «free time». These technologies must be user friendly, easy to install and explain to students.



Free to use for teachers

Teachers spend an average of USD 479 a year of their own money to support their instruction. Most of the edtech need therefore to be free even if there are limited usage, advertising or in-app purchases. The edtech solutions can also be paid by schools.

Major technological trends in 2019



An immersive learning environment

Technologies that promote immersion experimentation, and thus better student engagement, are preferred. Augmented Reality and Virtual Reality help students to experience 360 immersive environments and engage in realworld exploration.



Creativity

The technologies that help students learn to think outside the box, work collaboratively and empower their innovative skills are essential. Technologies support students by strengthening their ability to adapt to tomorrow's job market.



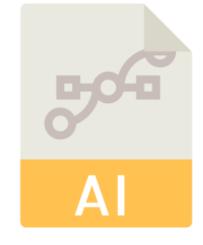
Gamification

Learning through play and fun is an ever-increasing trend among Edtechs. Its integration into classrooms by teachers is simple and generally inexpensive. This trend is producing rapid effects with greater commitment and participation, as well as improved pedagogical resources.



Offline Solutions

The Edtech market also focuses on the creation of offline apps, platforms and other services. Making these solutions accessible is a priority while most of the world's population still does not have convenient access to the Internet in 2019.



Artificial Intelligence (AI) and automation

Al is increasingly present in the education sector. It promotes student learning but also facilitates the processing of teachers' administrative tasks, corrections etc. It provides statistical reports and improves classroom and school management in general.





EDTECH TRENDS





Collaborative course learning platform and soft skills

Online platforms allow information to be transmitted and facilitate access and learning processes.

- The accessibility of knowledge is the main advantage of these technologies for teaching across different media. They enable remote learning at the appropriate time for the individual.
- These platforms foster collaborative relationships between teachers and students. They facilitate group activities and communication.
- They enable the monitoring of the evolution of learning and the implementation of pedagogical procedures.















Artificial Intelligence and adaptative learning

Artificial intelligence (AI) in Edtech facilitates learning which is personalized. Edtechs learn themselves how to teach students better.

- Al helps to understand the individual's reasoning, to take into account his/her knowledge and the best ways for him/her to learn.
- This technology facilitates understanding by using the most appropriate techniques at the right moment.
- Teachers can use the analysis made by these tools to better understand students and their processes.



















EDTECH TRENDS





Experiential learning platform

Edtechs link internship offers with teachers and students.

- These services provide a better understanding of the labor market and its opportunities.
- Students receive hands-on training with mentoring from experts.
- Companies can discover new talents whereas students can discover the job market.







Language learning

Language learning is easier and faster.

- Edtechs measure the individual's pace of learning and calculate the appropriate timing of teaching and adapt course content based on knowledge.
- These technologies are permanently accessible and enable more effective learning processes.







Life at school in community

Edtechs promote the school community and the smooth running and functioning of the school.

- These technologies promote communication between teachers, students and parents.
- They facilitate administrative procedures such as tracking school records or absences, for example.
- They highlight new pedagogical techniques to support students, for example, with awards.



















EDTECHS TRENDS





Game-based learning

Edtechs use games to facilitate learning. These are fun and educational technological tools which are used to attract the attention of students of all ages.

- These technologies make it possible to reinvent learning methods using neuroscience.
- They value collective interaction and intelligence as well as group experience and creativity.



















Tools for evaluation, creation of exams, correction and follow-up of copies with an anti-cheat system

These Edtechs provide access to a secure platform in order to set up an evaluation procedure.

- They allow the creation of exams (MCQ, gap text, essay, graphs...) in all subjects, and the correction of these exams.
- These platforms facilitate the monitoring of student results and the visualization of changes in grades per student and per class.
- These technologies are secure and prevent any cheating.



















Make your class fun and interactive

Wooclap is a digital platform that makes classes and courses more effective and fun. The app promotes student learning through their engagement and participation. The start-up offers the opportunity for the teacher to ask different types of questions and to collect feedback from students instantly. Rather than fighting smartphones, Wooclap turns them into a learning and collaborative tools.

Type

Collaborative course learning platform and soft skills.

Competitive advantage

The competitive advantage of this application is that it stimulates students interaction and engagement while measuring real-time understanding.

Price

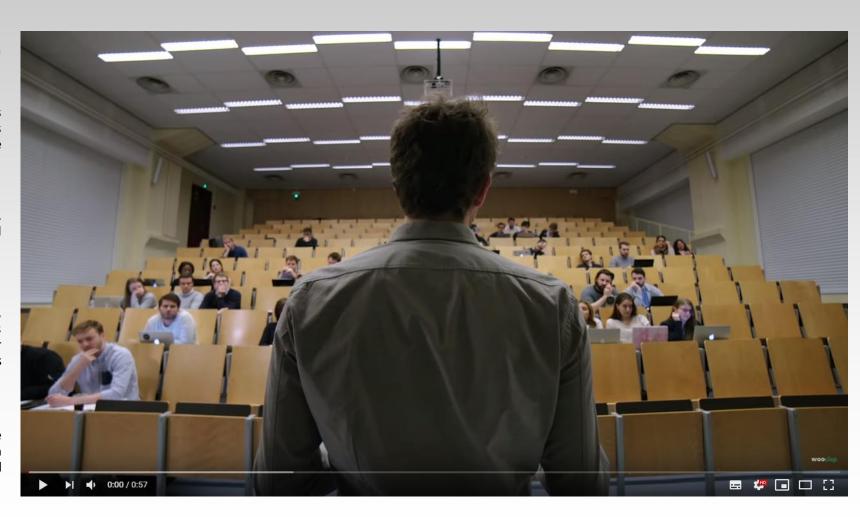
Wooclap is based on a freemium model. Different subscriptions are offered depending on how it will be used.

Feedback from experience

Wooclap is a very successful company, as evidenced by the many awards it has received (Microsoft Innovation Center Award...) and the number of teachers using its solution.

Stage of development

Wooclap was founded in 2015. The start-up has raised EUR 1.5 million in January 2019 to fund its international development.











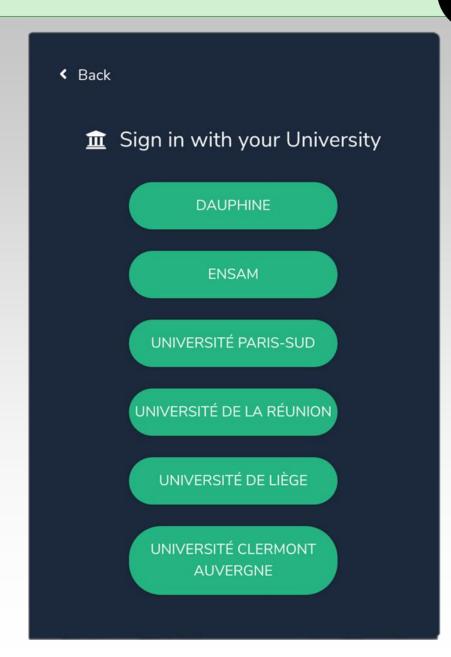
Make your class fun and interactive

Advantages

- The platform offers 20 ways to interact (multiple choice questions, word clouds, polls, open questions ...).
- It facilitates participation by enabling students to answer questions directly via the web (smartphone, tablet or computer) by connecting to a single URL or via SMS.
- Students can express themselves in real time during the presentation on a "message wall".
- Participants can answer anonymously or by identifying themselves.
- Ability to interact before, during and after class. Students can answer questions from home, before and after class.
- A database of 10,000 questions is available to help teachers build their presentation.
- Presentations are easily shared to other teachers, which encourages interaction from the teaching staff.
- The distribution of the questions and answers is possible.
 Teachers can download a report of the session.
- Wooclap allows the integration of other tools such as PowerPoint, Google Slides, Moodle, Blackboard, Canvas ...).

Number of users

The platform is used by more than 100'000 teachers and trainers in more than 100 countries in six languages. Wooclap also offers its solution for companies to make training, events and presentations more interactive.









Make your class fun and interactive with Wooclap

Analysis of the interests

First of all, Woodap promotes a continuous engagement of students through the many interactions available.

Students answer the teacher's questions via the Web or via SMS. The teacher can measure in real time the understanding of the concepts taught. Depending on the answers to a given question, the teacher can re-explain a notion that would have been misunderstood by his class for example.

The possibility of integrating many services (PowerPoint, PDF ...) offers a certain added value by not limiting the teacher in the choice of their resources.

The ability to download presentation reports with questions and answers gives the opportunity to the teacher to conduct post-course analysis and adapt the content of the following classes based on the results.

The platform does not have the sole purpose of fostering interaction during class but also promoting distance learning. Teachers can use this platform for sharing homework or exams.

The full version of the app is free for secondary and primary teachers.

The service offered by Wooclap energizes courses, measures student understanding, stimulates student participation and motivation, and enhances learning and collaboration.

Some limitations need to be specified: a large number of participants require a powerful Wifi. In addition, the platform was essentially designed to answer the needs of graduate students than any other level.

Using the platform too frequently during elementary or high school could curb students' learning about speaking in public.







https://www.wooclap.com/









Digitalize and secure your diplomas

BCDiploma is a Web application based on Blockchain technology allowing schools and academic institutions to certify the diplomas they issue, by providing their students with a URL link to access and store them durably.



Competitive advantage

In a context of widespread resume fraud, where employers are increasingly checking candidates' backgrounds, the BCDiploma solution allows schools to facilitate and automate verification of diplomas' authenticity.

Type

Tools for evaluation, creation of exams, correction and follow-up of copies with an anticheat system.

How does it work?

- The educational institution issuing the diploma is certified.
- The institution completes the diploma data (name, date of birth, specialty, mentions ...) on the blockchain through the BCDiploma application.
- A unique URL gives access to the assigned diploma.
- The student can then share the URL securely with any third party.

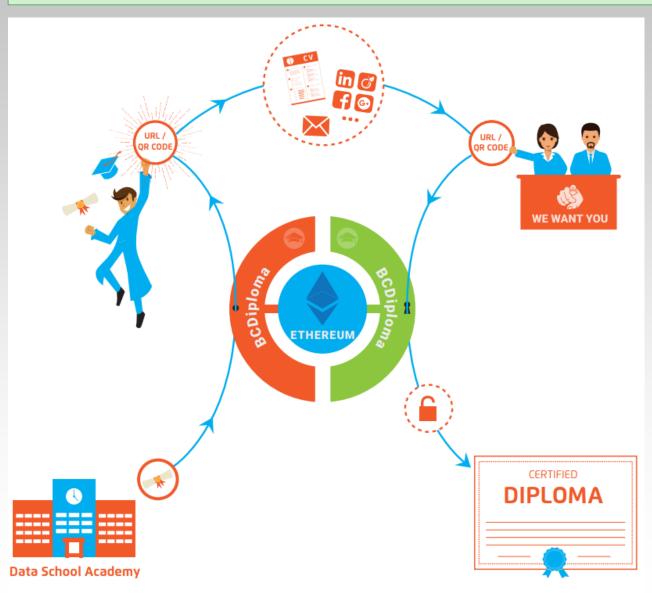
Advantages

- BCDiploma guarantees the identity of the issuing school.
- The BCDiploma encryption algorithm associated with data storage on the Ethereum blockchain guarantees a tamper-proof diploma.
- Possibility of defining the graphic charter of diplomas.
- Issuance of diplomas (import of an Excel file into the BCDiploma application which will fulfill the diplomas).
- Each graduate has a URL link allowing him to access his diploma for life and share it with any third parties.
- Efficient storage solution: no more requests from former students or potential employers to certify the degree.
- Solution in accordance with the EU General Data Protection Regulation. "Right to be forgotten" is easy to set up.





Digitalize and secure your diplomas



Stage of development

Founded in 2017, BCDiploma assists 25 institutions in 20 countries on 4 continents. The start-up raised EUR 1.2 million in May 2019 with the aim to fund the deployment of the solution in the 10 most prestigious schools of each continent this year.

Feedback from experience

BCDiploma is a very successful company, as evidenced by its number of customers (25 clients in 10 countries; the first operational version of the solution has been launched in September 2018) and their presence within Microsoft for Start-up Program.

Price

Unit cost: Institutions pay a set amount for each degree registration.

- The school registers the diplomas on the blockchain through a user-friendly web application.
- 2 Each student receives a URL link / QR code, which he/she can share on his/her CV, job boards, social networks, etc.
- The recruiter uses this URL link / QR code to verify the authenticity of the diploma.
- He can hire the candidate!





Digitalize and secure your diplomas

Analysis of the interests

BCDiploma is an application based on blockchain technology that certifies diplomas issued by a school, and provides students with a URL to access and durably store diplomas.

In the context of widespread resume fraud, the BCDiploma solution, through its encryption algorithm and the Ethereum blockchain, ensures the security and reliability of the diplomas issued.

The application seems relatively intuitive. Diplomnas are automatically filled from an Excel files, which significantly saves time from processing and issuing diplomas.

Following the same logic, students can share their diplomas with employers by sharing the URL link. This removes the need to verify diplomas with schools. It limits the administrative workload and costs for educational institutions. BCDiploma could easily be profitable for schools administration. The BCDiploma application also drastically reduces storage costs for student diplomas by placing them on the blockchain.

Moreover, the use of the BCDiploma solution allows institutions to reinforce their innovative image by offering this type of digital service to their students.

Finally, BCDiploma is a "turnkey" solution to benefit from blockchain technology without having to manage the technical aspects.



ACCELERATION PROGRAM

BCDIPLOMA

From: April 24, 2018 To: October 24, 2018

Has been selected and has been accelerated in

Chain Accelerator Program in Station F, Paris.

Chain Accelerator Alumni certified status

By decision of the Board of the program on October 25, 2018

Program Manager









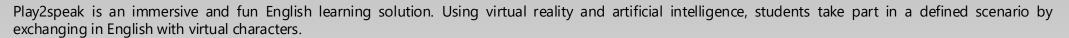








An imersive method to practice English



Type

Game-based learning

Competitive advantage

This solution's competitive advantage is the use of game mechanics and immersion for learning purposes. It allows, inter alia, to overcome the phenomenon of Foreign Language Anxiety.

Stage of development

The company was founded in 2017. The first scenario was commercialized in December 2018. The start-up is currently in the development stage. Play2speak raised EUR 50'000 on April 09, 2019 through a crowdfunding campaign to fund the development of experiences, game (new interactions...). The adaptation of the game to new virtual reality helmets (much cheaper in terms of price) is also an axis of development.



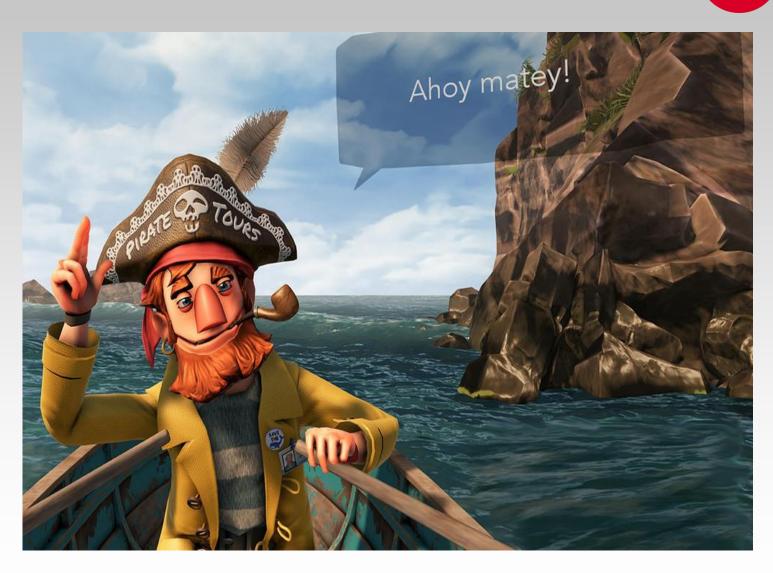




An imersive method to practice English

Advantages

- Play2speak promotes the practice of English (comprehension, speaking, vocabulary) by immersing students in a scenario of a playful world thanks to virtual reality and artificial intelligence.
- Users improve their pronunciation skills by exchanging with virtual characters (all native speakers).
- Virtual reality makes it possible to overcome the Foreign Language Anxiety while promoting student engagement through the gamification process.
- Learning vocabulary and phrases in a given context facilitates memorization.
- The start-up is consulting Cambridge Assessment English to improve the learning experience within the proposed scenario.
- A regular feedback is provided on the participants' progress. At the end of the scenario, grades are given to qualify the participant's ability to speak, read and listen.
- The price of the scenario is relatively affordable (CHF 6) contrary to the purchase of a virtual reality kit. Compatible headsets range from USD 500 to 1000.











An imersive method to practice English

Analysis of the interests

Using virtual reality and artificial intelligence, Play2speak offers a scenario in which students can exchange in English with virtual characters. The start-up seeks to counter a well-known effect in learning a foreign language: the fear of being judged.

People learning a new language and speaking to a native speaker are sometime prone to feeling embarassed. The use of virtual reality makes it possible to overcome this fear. The student is alone in his interaction with the virtual character.

In addition, the game mechanisms for learning purposes make it possible to strenghten commitment on the part of the child and facilitate learning of the vocabulary and pronunciation.

However, there are a few limitations: firstly, the start-up currently offers only one scenario and can lead to a decrease in student engagement. In addition, although the price of the solution is relatively modest, acquiring a virtual reality traditionnal kit can be expensive for a school.

The founders of Play2speak have taken into account this obstacle in the development of their product and are working to adapt the scenario to virtual reality standalone headsets that are more economically accessible.

In addition, it seems difficult for a school to acquire a virtual reality headset for each student. Therefore, the use of the solution Play2speak would be in group (experience of the student would be broadcast on a television) which could reintroduce the fear to be judged.



Feedbacks from experience

- Most innovative startup at the 2018 SIMO Education Innovation competition (Impulso).
- Winner of the Google Entrepreneurs Startup Weekend in 2017.
- Finalists (top 15 out of 507) at the 2018 EU Startup Summit competition.
- Finalists (Top 100) at the South Summit 2018 EdTech competition EnlightED.











Educational games for special education

Kinems is an innovative educational platform designed to help students with multiple learning disabilities such as autism, dyspraxia and attention deficit hyperactivity disorder (ADHD) achieve goals and skills. The platform develops personalized learning games using the Kinect virtual reality system for Microsoft's console Xbox360. The games help children improve executive functions (motor planning, concentration, memory, time management...) as well as cognitive skills (maths, linguistic development, pre-writing skills).





Advantages

- Kinems integrates in the mechanics of the games the gestures prescribed by the therapists.
- Children can naturally interact with learning games through hand and body gestures.
- Gamification reinforces the commitment and involvement of the student.
- Possibility to customize the games (level of difficulty, content ...).
- Ability to monitor cognitive and motor skills progress and report them.
- Easy to use: (Microsoft Kinect Camera and Kinams Software).

Competitive advantage

The competitive advantage of the solution is the fact that the games have been designed with therapists and are medical protocol-based.

Type Game-based Learning.

Feedback from experience

Several scientific studies using different methodologies showed that Kinems has a positive impact on children's academic performance and their cognitive, motor, and academic skills.













Educational games for special education

Analysis of the interests of this offer

Kinems developed a game-based platform that uses Kinect technology to offer children with learning disabilities developmental disorders the possibility to develop different skills.

The major interest of this platform is that the games have been designed in conjunction with educators and therapists. The games are customizable to the needs of the child.

Gamification allows the child to engage in his learning by reinforcing his attention, concentration and motivation.

In addition, a comprehensive monitoring and reporting system tracks the child's progress in motor skills and academic skills.

The hardware needed to use Kinems is relatively affordable (about USD 170). However, the games are designed for kindergarten until the end of primary school.







CLANED

Artificial Intelligence at the service of the student's personalized learning

Claned is an online and mobile learning tool, which creates a learning space for each learner. Within that space they study, collaborate and find material matching their individual need. Claned applies artificial intelligence and learning research, revealing what factors impact individual learning. Teachers are then able to offer a personalized learning path for each student.

Type

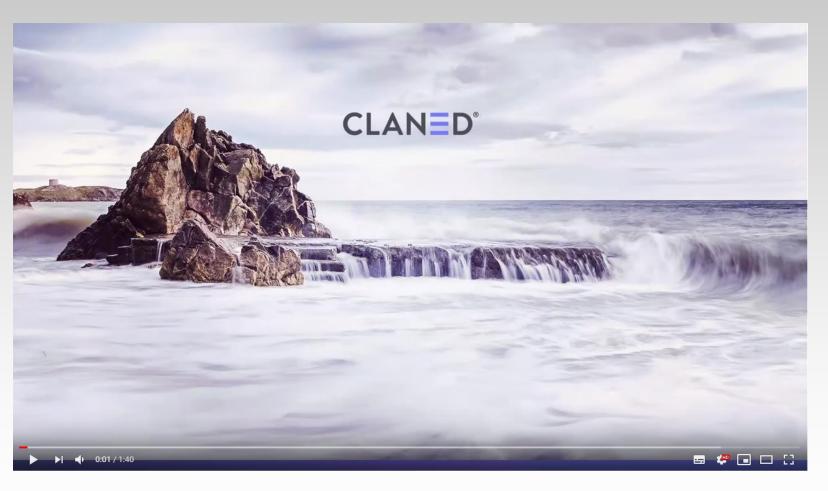
Technological offer that allows above all facilitated and personalized learning stemming from artificial intelligence. An online and collaborative platform.

Price

Free for individual users. Organizations pay a subscription fee of EUR 20-60 per user per year.

Advantages

- Solution allows students to bring together into communities based on their interests and specialties.
- The system measures and analyses learning results, allowing the teacher to follow each student's progress and intervene if necessary.
- students Claned gives the recommendations for suitable study material and alternative learning paths.
- Teachers can create tailor-made classes for each student.
- Platform is very intuitive and easy to use.
- Social interruptions are an integral part of educational material and not a mere option.



Competitive advantage

The competitive advantage of the plarform is that Claned is able to understand how learners learn. Teachers then can tailor their classes based on student needs for the most effective education.





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Artificial Intelligence at the service of the student's personalized learning



Analyse of the interest of this offer

Claned is designed to fulfil a wide range of learning needs for different educator and learner profiles.

It allows to create a collaborative learning area and invite peers or students to establish a learning community. It helps to improve study outcomes with its awareness of what it is necessary to learn, and how.

Claned is designed to capture data on every interaction learners make with the system. This results in a comprehensive insight that demonstrates the learners' study performance and learning orientation, but also motivation, emotion and stress levels. Claned helps learners to learn how they learn.

Claned has received many Edtech awards. This technology seems ideal for improving students' learning based on their own ways of understanding.

This offer could be an additional strategic service to modernize its image, improve the results of an educational institution and justify substantial registration fees.

Feedback from experience









