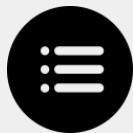# EVOLUTION OF EDTECH BUSINESS MODELS

Prospective monitoring
December 2023

Summary of the december 2023 edition

foxar

Foxar is a platform for creating interactive content in augmented reality or 3D.

halfonse

Halfonse is a learning platform that bridges the gap between education and the professional world, making it easier for students to follow their progress in the workplace.

POWERZ

PowerZ is a free educational video game of adventure and exploration, focusing on the learning of various school subjects.

pi-top

Pi-top is a teaching system comprising a curriculum, a learning platform and the equipment needed to learn computer science and home automation.

bloomz

Bloomz is a platform that unifies different means of communication, making it easier for all stakeholders to interact.

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 organise, 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. This 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 it needs to be constantly aware of changes in its market, so as 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 OUR EDTECH TRENDS ANALYSIS

GENEVA INTELLIGENCE
STRATEGIC INFORMATION

Analyse des tendances Edtech

Main technological trends

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

Gamification		Artificial intelligence
Big Data	VR	VR

Publication of the report
"Future of EdTech Report" | 2023

Founders Forum Group has published a report in partnership with the Institut auf dem Rosenberg. The aim of the report is to bring together the world's leading edtech founders to reveal the key trends shaping the future of education, as well as the greatest opportunities and challenges ahead. Numerous interviews are available, as well as various research studies.

Nouvelles marquantes

Clayful

*Clayful, a startup that helps students connect with mental health experts in 60 seconds, raises **USD 7 million (CHF 6.1 million).***

Interactive CARES

*Interactive Cares, an educational technology startup based in Dhaka, has raised **USD 100,000 (CHF 87,440)** in a round of financing.*

EDUFi

*EduFi , a fintech startup headquartered in Singapore, has raised **USD 6.1 million (CHF 5.6 million)** in a pre-seed financing round.*

*NOLEJ raises **EUR 3 million (CHF 2.6 million)** to make artificial intelligence available to teachers.*

Foxar is a platform for creating interactive content in augmented reality or 3D using a smartphone or tablet.

Type
A tool to aid learning and the acquisition of knowledge.

Competitive advantage
Foxar relies on visualization to make courses more engaging and understandable for learners.

Price
The solution is based on a freemium approach, with a free version offering a certain number of models, and a paid version called "Foxar+", which is only available to schools on request. This version includes all the models, explanatory videos, exercises and new models every week. However, there is also a "Foxar+" offer for private customers at EUR 6.99 per month (CHF 6.62) or EUR 69.99 per year (CHF 66.30).

Number of users
According to an article by Frenchlot, as of May 2022, the Beta version of Foxar has been downloaded over 50,000 times and has more than 2,000 registered teachers.

Level of development
The start-up was founded in 2020 by Louis Jeannin and Nicolas Caligiuri. It is a 2020 and 2021 winner of the French IoT competition, a Réseau Entreprendre Bourgogne prizewinner, and has also won other awards. Its development is fairly recent, but the technology seems mature.


How does it work?
Simply open the application with a tablet or smartphone to display a library of augmented reality (VR) models. Foxar can also be opened directly with a web browser for 3D rendering.

Link https://foxar.fr/

Features :

- Foxar **offers models in augmented reality or 3D** when the environment is inadequate (not enough light, a surface with too many elements to make objects appear, etc.).

- The solution is **available on a variety of supports** : computers, tablets and smartphones. The augmented reality mode is only available on devices with a front-facing camera, i.e. tablets and smartphones in general.

- The **models are interactive**, whether with the dashboard or via the module elements. It is therefore possible to play with time, distance and object size to observe the effects on projections.

- Customized content can be requested to **produce specific models**, particularly for professional use. From the example on the website, it seems that a simple 2D design can be transformed into 3D content and augmented reality.

- A **wide range of subjects and themes** are on offer, including astronomy, art, geography, history, mathematics and more.
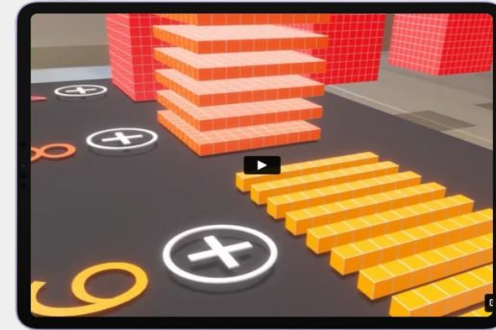
| Kindergarten ★★★ | High School ★★★ |
| Elementary School ★★★ | University & school ★★★ |

How receptive learners are depends on the type of medium. Indeed, it can be difficult to retain notions when they are abstract. That's why Foxar's visualization mode helps students who need more concrete methods.

- The strength of this tool lies in its ability to offer models in augmented reality or 3D. The aim is twofold: firstly, it allows you to visualize different notions that may be complicated to explain in writing or with a two-dimensional diagram. This **will make it easier for the whole class to understand.** The second objective is to be able to offer a new type of support, in order to stimulate the students and consequently **increase the involvement of all learners.** This increase in involvement should have a knock-on effect on academic results, and according to the website, this new form of illustration **reduces the gap in understanding within groups.**

- The **solution is multi-purpose**, with one part focused on general culture, called "education", and a second part focused on professional trades, called "formation Pro". In addition, it is **possible to request the creation of specific mock-ups** according to the needs of teachers, particularly for more professionally-oriented courses. The number of subjects on offer with **models already available is fairly exhaustive**, ranging from astronomy to geography and earth sciences. The diversity of the models on offer means that a large number of teachers can use the solution. Similarly, if the school was reluctant to invest in digital equipment, this tool **can be used in several fields.**

- Foxar's intuitive nature and ease of use make it **easy to get to grips with**, whether for students who don't make much use of digital tools, or teachers who have difficulty with computers. All you have to do is use the application, select the theme, then choose the model.

However, there is still room for improvement :

- For the tool to be as immersive as possible, and so that students can take full advantage of the augmented reality mode, the digital tool needs to have a front-facing camera. For this reason, a tablet or smartphone is the ideal device. However, not all students, particularly younger ones, have this type of device, which can **increase the digital divide.** The school can purchase the necessary equipment, but this **represents a significant cost.**

- Foxar will tend to get students moving around in augmented reality mode, which creates a dynamic atmosphere, but **can quickly make the class noisy** and difficult for the teacher to channel. One tablet per group of 2-3 students could be a solution to this.

Halfonse is a learning platform that makes it easier for students to follow their studies on the job, to ensure greater continuity between school and working life.

Type
Pedagogical follow-up platform.

Competitive advantage
The tool takes the form of an ergonomic platform to better follow learners in the professional world, notably by simplifying stakeholder communication.

Price
No relevant information was found. It seems that this tool is only available on request.

Number of users
No relevant information was found. The website features partners such as École Énergie Tech and INSEEC.

Level of development
Halfonse is a start-up co-founded in Lyon in 2021 by Maud Houssai and Cécile Poch. The company is a winner of the Demo Days 2023 competition and also receives support from the Lyon metropolitan area. INSEEC is also one of France's leading business schools. All these factors demonstrate the company's advanced level of development.
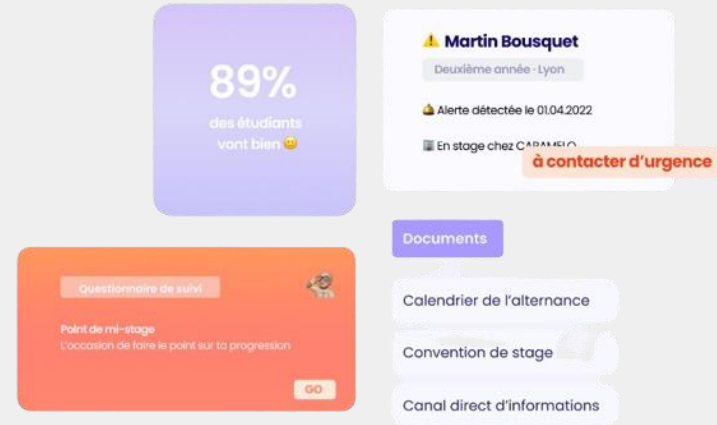
How does it work?
The tool takes the form of an online platform where students, the school and the company have their own functionalities and means of communication. The aim is to guarantee the satisfaction of each stakeholder and facilitate exchanges between them.

Link https://halfonse.com/

Features :

- The solution **provides a calendar** with course weeks and company weeks. This schedule is available to all stakeholders, whether the school, the student or the organization.

- By tracking students and tutors, Halfonse **measures the well-being of learners.** In the event of a problem being detected, an alert is sent to the school so that it can contact the student.

- **Various follow-up questionnaires** are set up for students and tutors to monitor progress. The questionnaires are already set up by the solution, but can be customized by teachers.

- The tool allows students to **self-assess at key moments during the work placement,** and to compare progress over time.

- If the learner needs help, he or she **can contact the teaching team directly.**

- Halfonse enables companies to **gain a better understanding of the trainee's profile,** with key information such as his or her curriculum, the next time the learner is with the company, his or her career path, and so on.

- The solution also serves as a third-party platform for **secure document transfer** between the various stakeholders.

OUTILS MANAGÉRIAUX

Créer un environnement sain pour l'évolution des alternants

intégration et formation

Kindergarten ★★★   High School ★★★

Elementary School ★★★   University & school ★★★

An internship is often the first experience in the professional world for many students, and it's a complete change from the academic experience, especially in terms of freedom and autonomy. This can be confusing for many learners, especially if the relationship with the company is not going well. Halfonse is a solution that facilitates communication between stakeholders to increase trust and a sense of security for learners :

- Halfonse sets up alerts that measure the well-being of students and sends a notification if they are in difficulty. This system not only **limits the number of dropouts**, but also enables us to be much more reactive in the event of a problem. Indeed, in many cases, learners don't dare ask for help, and the situation deteriorates until it's no longer bearable. This feature not only **reassures students, but also their parents,** enabling schools to differentiate themselves and potentially increase enrolment.

- One of the strengths of the tool is that it provides a single calendar for all stakeholders. The alternation between in-company and academic weeks **is much easier to visualise**, both for the company and for the students, which makes organization **easier for the company members, and especially for the "internship supervisor".**

- The ability to contact each of the participants directly **facilitates communication.** Halfonse helps to reassure trainees, who in the event of difficulties improve communication with the educational team. This is also true for companies, who can feel a greater sense of involvement on the part of the trainee or the school. This can **make it easier to secure an internship,** which is becoming increasingly difficult to find.

- The various evaluation points proposed at key moments during the student's work experience enable them to assess their own performance, but above all **to see how far they have progressed** from one evaluation to the next. This not only **boosts motivation,** but also enhances the value of professional experience, both within the company and for future employment.

- Having a secure third-party platform for important papers greatly simplifies the task for all involved, and **saves considerable time.** It prevents documents from being lost or returned late, which can lead to administrative problems.

However, we must remain vigilant on one point :

- As we've just seen, Halfonse has a number of advantages, enabling us to provide better support for both students and companies. This type of tool can be seen as a guarantee of greater involvement, but **can also be seen as an additional constraint for employers.** This solution could be an obstacle to finding an internship. Indeed, if a supervisor has little knowledge of IT, he or she won't want to use the platform. For this reason, it seems appropriate to leave the choice to companies and potentially keep the platform solely between the school and the learner, even if the solution loses efficiency.

PowerZ is a free educational video game of adventure and exploration featuring different school subjects to help students learn.

Type
Educational video game.

Competitive advantage
The solution uses gamification (serious game) as a means of increasing learner involvement.

Price
The tool is free, but a premium subscription called PowerZ+ is available for EUR 7.99 per month (CHF 7.69). This provides a tracking application for parents and also gems, which represent virtual currency for the game. The latter can be used to purchase cosmetic items.

Number of users
According to a September 2021 article in Ouest France, the platform claims to have nearly 30,000 regular players. And according to an article in Le Journal du Dimanche, the goal is to reach 100 million users.

Level of development
PowerZ was developed by Emmanuel Freund following the Covid-19 confinement. Its creation date is September 15, 2020, and the game was released on February 15, 2021. The company raised EUR 7 million in July 2021 (CHF 6,731,550), enabling it to expand rapidly, notably by offering an English version. Today, the company has between 11 and 50 employees, demonstrating a strong level of development.
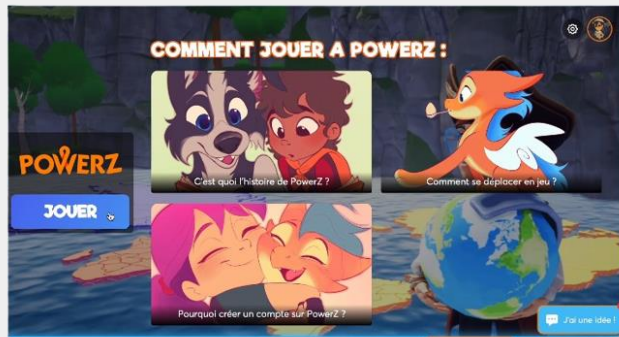
How does it work?
PowerZ is played like a conventional game: first download the software, then log on. The player then takes on the role of a character in an open world, with the aim of completing the various quests available.

Link https://powerz.tech/fr-fr/

Features :

- **Offers an educational game** that takes up all the codes of a classic video game, with a system of quests, movement, story, etc.

- It's possible to **customise the game character** by changing hairstyle, gender, outfit, etc.

- Numerous quests/exercises are **available for different subjects,** including mathematics, geography and more. PowerZ also offers exercises for learning foreign languages and even sign language.

- The solution is **available on different platforms :** computers, smartphones and tablets.

- The game can be accompanied by an **application that tracks the learner's progress,** with different subject statistics and progress curves. It is also possible to **view play time and plan usage** with a parental control system.

- With the help of artificial intelligence, the game **adapts to the learner's level.** The aim is to keep each learner in his or her zone of proximal development.

- It is possible to **play in pairs,** but also **in competition** with the whole class, a mode known as "Olympiads".

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

Young learners tend to have early access to digital tools, especially smartphones, which facilitates access to video games. The problem is that not all types of content are beneficial for young learners' development. PowerZ offers a solution that combines video games with the acquisition and deepening of new knowledge :

- The solution's greatest strength is that it **offers a high-quality video game free of charge.** The paid offer is interesting for parents or teachers who wish to monitor the time spent on the game or their children's progress, but the latter is not an obligation. From watching the various videos, the graphics are very pretty and the story is well developed. Character customization is fairly basic, but is present nonetheless, **giving learners extra motivation to want to play the game.**

- The fact that PowerZ can be offered on several platforms means that the **largest possible number of learners can be included.** It also means lower costs for schools, which don't have to invest in new hardware, but can use students' own computers, tablets or even smartphones to **keep costs down.**

- The introduction of this tool represents real added value for teachers, who will be able to diversify their learning methods. Indeed, **gamification generates greater student involvement,** which should boost the overall level of the class. What's more, artificial intelligence modifies the difficulty of exercises and **adapts to all students,** so that no group gets bored and no group keeps up because the exercises go too fast. It is also possible to work in pairs to develop student cooperation. Similarly, the Olympiad module mobilizes the whole class around a **single activity to develop group cohesion.** These different types of games can be used at the start of the school year to "break the ice" between learners.

- The availability of the "PowerZ Companion" included in the PowerZ+ subscription offers several advantages. It lets **you monitor the time spent on the game,** as well as plan its use to limit learners' exposure to screens, which is beneficial not only for teachers, but above all for parents, who can be reassured that their children are not spending all their time in front of screens. What's more, this subscription **offers progress statistics** so that you can monitor learners' progress over time and detect any difficulties.

- Numerous quests corresponding to different themes are available, and unlike many tools, PowerZ can be **used by all teachers, whatever the subject.** There are also activities such as learning sign language and meditation initiations.

- The solution specifies that **data is collected solely with users' consent and will never be sold or rented to third parties,** nor used for advertising purposes. This is essential for an application aimed at the very young.

Nevertheless, we must remain vigilant :

- Although the tool offers "PowerZ Companion" to regulate hours of use, **it's not a good idea to leave young pupils in front of screens for too long.** For this reason, PowerZ should be used sparingly. It's also a good idea to let parents know how much time is spent in class behind a screen.

Pi-top is a teaching system comprising a curriculum, a learning platform and the equipment needed to put computer science and home automation into practice.

Type
Practice-based learning tool.

Competitive advantage
The solution first provides training and digital content to develop IT skills, and then hardware to put theory into practice.

Price
No relevant information was found. It seems that this tool is only available on request. The higher the number of students, the more materials are required. The price will depend on the number of learners in the class.

Number of users
Little relevant information has been found on this subject.

Level of development
Pi-top was co-founded in by Jesse Lozano and Ryan Dunwoody in 2014 with the aim of making computing accessible to everyone. They first succeeded in building the first Rasbperry Pi-based laptop, then continued to develop their business. In 2023, the start-up was named winner of the EdTech Digest Cool Tool Award for the best coding, computing and engineering solution. According to LinkedIn, Pi-top currently employs between 50 and 200 people.

How does it work?
Curricula and a learning platform are made available to students, but supervised by the school and teachers. At the same time, robotics equipment is provided to put into practice the various notions seen in class as well as those available online on the learning platform.

Link https://www.pi-top.com/

Features :

- A curriculum is available, comprising over **125 hours of interdisciplinary courses,** from beginner to advanced levels.

- The tool provides a **learning platform** with digital content and a classroom management tool called "Further" designed for IT teaching. The latter offers numerous functions, such as student identification with Clever or Google Classroom, as well as the option of requesting different LMSs.

- Teachers can **filter program content** according to training requirements, and customise courses by adding or deleting different sections. In addition, **specific tasks can be included** within the programs to assess students' understanding and areas requiring further work.

- **Training sessions and guides are available** to help teachers use the pi-top ecosystem in their classrooms.

- **Several kits are available,** depending on needs, to make lessons more practical and interactive. First of all, the Pi-top is the brain of the machine, the interface for entering codes. This can then be used in conjunction with a robotics kit to bring a small robot to life, or an electronics kit to set up lights, sensors and so on.

- The tool lets you **code on a computer** using a "Code Runner", then send it directly to your computer.

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

Theoretical courses are in the majority in higher education, but this can be a hindrance to students' understanding. With this in mind, and with the desire to pass on computer knowledge, Pi-top proposes to put the concepts learned into practice to make the courses more interactive and concrete :

- The greatest strength of this tool is that it offers different kits that can be used with training courses. This not only enhances **understanding of abstract concepts,** but also **increases learner motivation and involvement,** particularly among those who need to practice to progress. This is also true for teachers, who will be able to play with the tool and try to master it, which should **increase teacher-student interaction.** What's more, the Pi-Top's controllable electronic and robotic kits allow users to specialize in different fields.

- The learning platform named "further" is specialized for IT courses, but can be incorporated into different learning management systems (LMS) such as Clever or Google Classroom. It is also possible to integrate other LMSs if the latter is based on a cloud-based system. In this way, schools don't have to change part of their operation, **which limits costs.**

- The availability of a wide range of training courses means that many subjects can be explored in greater depth**, saving teachers a considerable amount of time,** which they can devote to more qualitative tasks. The teacher almost becomes the "animator" of the class, making it more dynamic. What's more, the courses offered can be fully modified and customized to **develop specific knowledge and skills that can be put to good use in the workplace.** Guides and training courses are also available to help teachers get to know the solution better.

- The "Code Runner" code program, which lets you build different code instructions on a computer, is a real advantage. Students can work directly at home, using only their personal computers. **This increases autonomy,** particularly for distance learning classes, and **limits the costs** of using this type of tool, for both learners and the school.

Although it has the advantages listed, it also has some disadvantages :

- Implementing a new tool of this type requires training for the teacher. For this reason, its integration can be very stimulating, or it **can meet with strong opposition from teachers** who don't want to change the way they teach.

- We haven't found any information on the cost of this solution, but it's logical to assume that the higher **the number of kits required, the higher the price.** As explained above, it's possible to code on your own computer, so you don't have to buy a Pi-top for each student. However, a single Pi-top or Kit per class seems to be too little to offer qualitative teaching. This is why the price can rise quite quickly. If the tool has a high set-up cost, then this can be an obstacle for schools.

Bloomz is a platform that unifies all means of communication, making it easier for stakeholders to interact and share information more effectively.

Type
Communication platform.

Competitive advantage
The platform brings together all communication channels, resulting in improved exchanges between stakeholders.

Price
According to the Bloomz website, the price is based on an annual fee per student, plus a one-off integration fee. The fee depends on the number of students, but also on the number of features incorporated. The price of this tool is given on quotation only.

Number of users
According to the official website, the solution claims to be used in more than 30,000 establishments and in 2017 more than a million users.

Level of development
Bloomz is a company founded by Chaks Appalabuttula in 2013, there are 9 employees listed on the official website. It has won numerous awards in recent years, including Best Communications Solution 7 years running in various competitions. In addition, the solution is represented as an approved supplier in several consortia and is also present in a large number of educational establishments.


How does it work?
The platform brings together four main types of communication. Firstly, "district communication", which represents school-related information such as attendance, grades, lunch balances and so on. Next comes "school communication", which considers parent organisations, sports teams, etc. The third type of communication is that of the "classroom", to give information about the course, form groups, etc. The last type of communication is called "PBIS/SEL", which analyzes social behaviors in various dimensions.

Link https://www.bloomz.com/

Features :

- It is possible to **set up announcements as well as alerts,** alerts arrive directly and can be sent via several media, such as e-mails or notifications on users' phones. **Different groups can be created** to send information to parents, learners, a specific class, etc.

- The tool **offers automatic notification** to schedule the transmission of information such as grades, meal balances, etc.

- The platform **can integrate a school's various social networks** by directly publishing announcements, notifications and alerts.

- To better understand the scope of the information transmitted, the tool **offers various statistics** such as read confirmation and number of clicks.

- Teachers can **notify the school if a pupil is absent,** while parents can directly notify the school and provide proof of absence.

- The **configuration for receiving notifications on the phone is very advanced.** Stakeholders can mute groups, set the application to "do not disturb" during office hours, disable emails or calls.

- **Many types of document can be shared,** from a simple message to a photo or a URL link.

- Data on student behavior can be aggregated to **create detailed reports.**

Kindergarten ★★★		High School ★★★
Elementary School ★★★		University & school ★★★
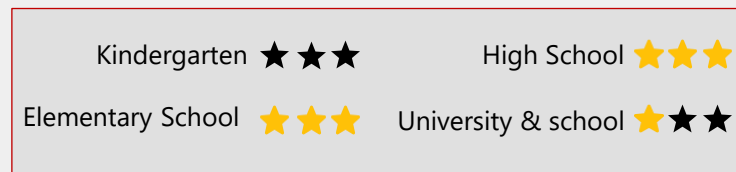
Schools use many different means of communication, and according to the Bloomz website, the average school district has between 5 and 10 communication applications. The aim is to have a single platform to centralise communication resources. The solution offers a number of advantages :

- The tool offers the possibility of creating multiple groups to send messages or notifications. This feature is very practical for a class or a whole promotion, but **it's also efficient for forming more specific groups** to bring together parents with students, or people with similar interests such as sports clubs, associations, etc.

- By customizing the notification center, you can **choose which means of communication the various stakeholders wish to be contacted,** whether by e-mail, call, SMS, or directly by the application, which can send notifications to the phone. In addition, it is possible to schedule the times when each user can be contacted; if a parent is at work, he or she can mute the application so as not to be, which **leaves more freedom.** For the school, scheduling mailings represents **a significant time-saver,** particularly for information that recurs periodically.

- The main aim of this solution is to **increase exchanges between the various parties involved,** by encouraging more direct interactions, notably within discussion groups. This increase in interaction is designed to **strengthen student engagement,** with particular emphasis on that of parents, who will now be able to communicate directly with teachers and the school. The ability to easily transfer documents, as well as report or justify absences, **saves organisational time** and reduces the risk of documents being lost or delayed.

- Setting up statistics is a valuable asset for schools. They can find out which subjects are of most interest to different groups, and also which times and days are most relevant, so that **the information is read by as many people as possible.**

- Bloomz provides data about student behavior that can be condensed into a report. Each student has a number of points, and the aim is to increase the score, demonstrating good behavior within the school. Points can be awarded by teachers, supervisors and, more generally, by all school staff with the appropriate authorizations. This system **can be used to highlight those students who contribute most to the school's good mood, but also to keep an eye on learners who may pose a problem, particularly to prevent bullying behavior.**

- The incorporation of social networks on the platform can encourage the development of this aspect, which is often neglected. The development of social networks means that establishments can **gain greater exposure,** which in turn leads to a **greater number of subscribers.**

Nevertheless, this solution can have negative effects :

- Implementing this tool can **put too much pressure on the various parties involved.** For example, teachers and school staff will have to deal with an increased demand from parents, which can be distressing if the pressure is too great. For students, it can be difficult to differentiate between the personal and academic worlds. Parents can also be much more solicited, which can be exhausting. That's why it's essential to set up the notification center properly.