

# Teaching Maths with a digital pen

I teach **Maths** on the outskirts of the centre **of a city** in Wallonia.

**14**

age of pupils  
 on average

**1,400**

pupils

**24**

pupils per class  
 on average

**40**

classes



## Teaching environment

We have some students with an **immigrant background**. In the lower secondary education school where I teach, we have **different profiles** of students in terms of socio-economic backgrounds.

## Digital tools

There was a platform provided by the school called **WBeschool**, which we did not use before lockdown. There were **some computers** available in our school.



## Experience with digital tools before Covid-19

I **didn't work with any digital tools** before Covid. When lockdown hit, the direction asked two or three teachers to make video clips and train us to enable to use the platform.

# The tool: WBE platform

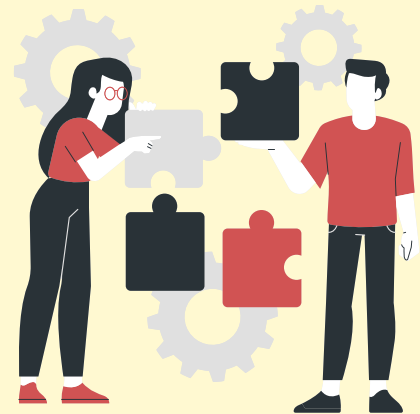


## Needs for this teaching practice

I wanted a way to teach and **write on a board**, which is essential in Mathematics. I also needed a way to **fill in the gaps** and let the students practice on their **mobile phones**.

## Needs solved

The platform WBE and my material -a **pen connected to my computer**- allowed me to write on a board while explaining the lesson to my students.



## Audience targeted

I targeted **all my students**, within my class.

# Organisation



We used the WBE platform as a way to teach remotely, a little bit like traditional video-conferencing. Students really needed **to keep in touch**, a thread. We decided among teachers not to put them on videoconference all the time, because **being behind a computer screen from 8am until 4pm is not easy**. So we tried to prioritise certain courses and to alternate teachers in relation to that.

That's why during some videoconferences I was present but I wasn't teaching. Students simply worked on their exercises. So **we tried to be careful** because students complained about being behind a computer all the time. In hybrid teaching, these were questions that were simpler, because we had time in class every other day. Students also said that they appreciated **having headphones or earphones on their heads**, it helped them to stay focused.

## Practice activity

I tried to alternate **synchronous teaching** and **autonomous working time**.

- During synchronous teaching, I shared my screen while writing **with the drawing tool**. I showed the lessons to the students and then, we would solve the exercises, with remarks, and I would talk at the same time, I would put colours, so really we were together in the course. **It was like our classroom**. This type of class allowed me to **answer the questions of students directly**. If my writing was not legible, I converted it with a mathematical editor application.
- During their autonomous working time, students **would do exercises or watch a video and practice**. We worked together with other teachers to make those videos and exercises. But, I was always there. I gave instructions, and then, they worked on their own while I was available online to answer their questions. Ten minutes before the end of class, we came back **together** and **talked about their difficulties and what they had learnt**.

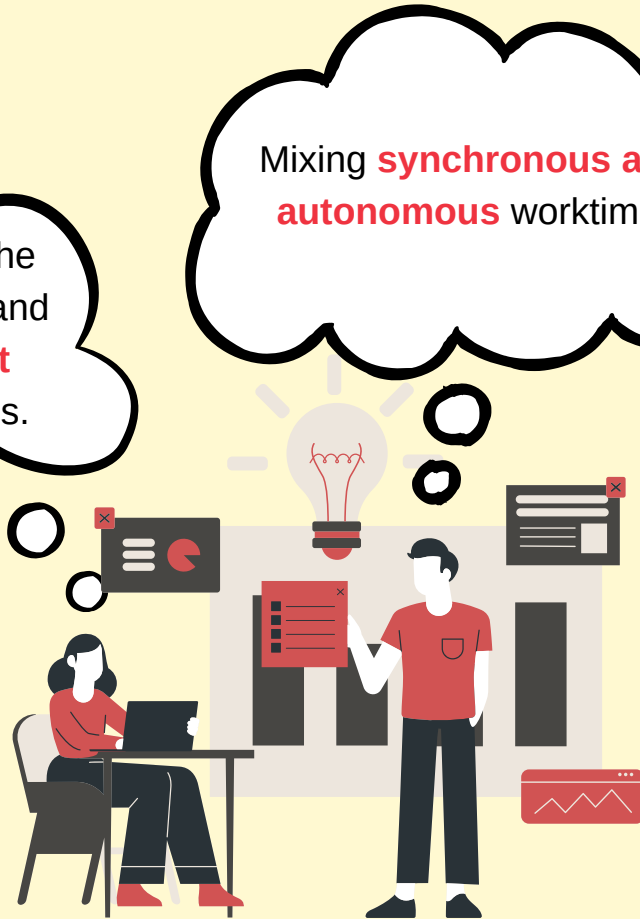


# Impact of the practice

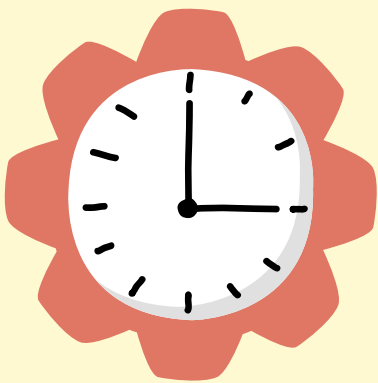
## An innovation

Pupils can **see** what the teacher is explaining, and they can have **direct feedback**, like in class.

Mixing **synchronous and autonomous** worktime.



## An efficient practice



- Students enjoyed having me available on videolink **every day**. It kept them going.
- To keep the **pace** calm enough for the students **to access the content** in Mathematics, a digital writing pen is essential.
- I succeeded in **keeping a connection with them** and practicing what they already knew.
- Students **kept practicing** and they stayed on track. All the material is still **available** on the platform for students.

# Keys to success

**Stay connected** with your students.

**Diversify the way you teach** your lessons.

**Train your students'** digital skills.

**Work** with other **teachers**.



## Benefits



Students were **more focused**.



Teachers can **be more available** for their students, which they appreciate. Teachers also cooperate more.



Students kept **pratising and learning** with different types of lessons.

## Ready ?

Training and guidance are crucial. Try to be available for your students when they need it. Make sure that your students are in a healthy state of mind for learning and follow a certain school rhythm - wake up time, daily school schedule...



# Resources

## Screenshots

A list of resources given to students to work autonomously.

**Apprendre les maths :**

**Applications gratuites pour Android et iOS :**

Aujourd'hui, apprendre les maths en s'amusant avec votre Smartphone, c'est possible à tous les niveaux et tous les âges grâce à plusieurs applications pour iOS et Android, dont une liste non exhaustive a été dressée. Nous vous présentons les meilleures applications gratuites pour maîtriser les rudiments de la mathématique.



Pour ce qui est des mathématiques, il existe sur le marché un certain nombre d'applications qui favorisent un bon apprentissage de la matière.

Faites-vous plaisir avec l'adresse si dessous !

<https://play.google.com/store/search?q=pythagorea&c=apps&hl=fr&gl=US>

*This portrait gives a representation of the teacher's choices which are not our own.*

*The statements in this portrait are not direct quotations but have been adapted from an interview which took place in 2022.*