

Technical lessons with a graphic tablet

I teach **electromechanics**, **industrial mechanics** and **electricity** in a middle-class town in Wallonia.

16

age of pupils
on average

2,000

pupils

20

pupils per class
on average

100

classes



Teaching environment

I teach at a **technical school**, in the industrial sector mostly. Students come from **a middle class or disadvantaged background**. We have developed a strategy called 'eec' which means 'conscious entrepreneurial school'. We are focused on **opening our school to the outside world**. We integrate the inhabitants of the district in our various educational projects.

Digital tools

We have a teaching and learning platform, Classroom but it **wasn't used by students** because of the lack of computer equipment at home. At school, there were **computer rooms** that were available for students.

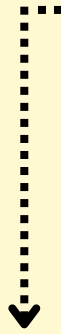


Experience with digital tools before Covid-19

A lot of digital tools **were completely unknown to me**. I had no training with digital tools. However, I am an engineer so I know how to use computers and I am a fast learner.

The tool: a graphic tablet

It was connected to my computer and could be used in different ways: in live lessons, to write easily as if I had a blackboard, on the explanatory video capsules I made of all my lessons, to correct tasks that students had sent me online in pdf-format and on which I could give my corrections and feedback, and send it back to students.

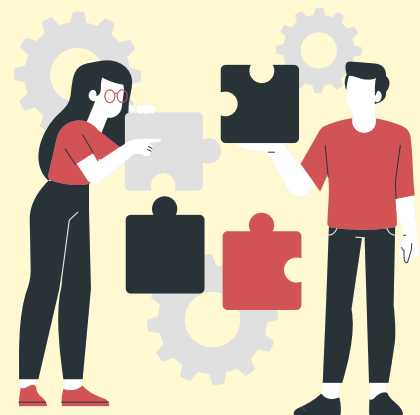


Needs for this teaching practice:

The lessons I give are quite theoretical. I had to **explain written formulas and exercises very gradually** and with a lot of explanations. I had to find ways to do this remotely in a low digitalised environment.

Needs solved

The graphic tablet is a tablet that is connected to my PC and that allows me to **annotate directly** the presentation that is being **projected in a video**, and I could write as if I was in class with a whiteboard. Students can watch it again on their phones, if necessary.

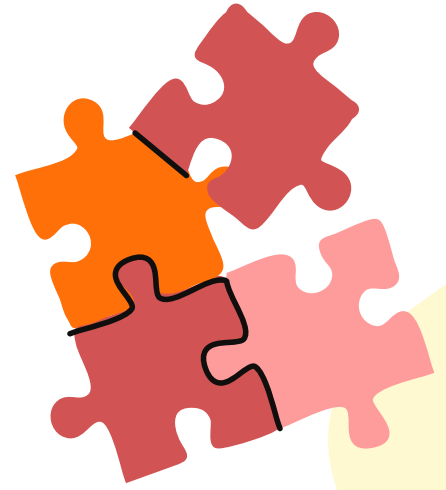


Audience targeted

All my students of all my classes.

Organisation

This tablet allows me to **write on a PowerPoint presentation when I record myself**. I uploaded these videos on a Google drive and they were shared on Classroom. So all my students could go and **watch them at any time**. For a half-hour video, you have to count 2 hours and a half of preparation and recording.



The tablet also allowed me **to use the PDF documents I got sent by students**, to annotate them, to correct them, and to explain what was wrong with the exercises they had done. It allowed me to **write on their pdf files very easily, and to save it and send it back to them afterwards**.

I first explained the students **how to easily make a PDF-document** with their mobile phones.



Practice activity

When I'm in a video conference with my students, I generally use PowerPoint. **I begin with an empty PowerPoint that I fill in during the course**. The tablet allows me to replicate my teaching practice remotely as if I were at the board in front of the students.

The online lesson is perfect to do a design course because I shared **my screen on which the software is displayed**. I talked to my students, I couldn't see them, but I gave them fairly strict instructions at the start.

I was also doing the **practical work on my shared screen**, so students could see what I was doing.

However, some students couldn't see my screen for technical reasons.

So I explained my lesson in such a way that **someone who couldn't see my screen, could do it on his screen without seeing what I was doing**.



Impact of the practice

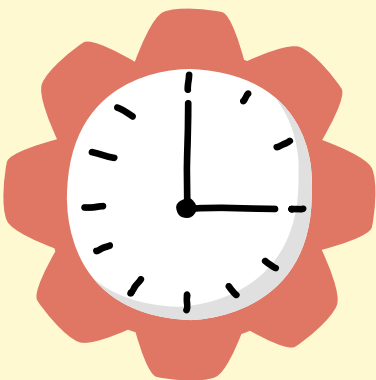
An innovation

I kept **teaching technical lessons** from a distance in an easy way.

My tablet allows me to do **all kinds of lessons** and **give feedback**. It **improved** my lessons.



An efficient practice



- I think students have **retained the main aspects**.
- I think that I was **making progress faster** remotely, because my students were focused. Especially in **hybrid teaching**, as videos at home were combined with explanations in class in smaller groups (flipped classroom).
- **My videos** are **still available for my students**. I know that there are students who will **watch the videos again**, to hear explanations that they did not understand well in class.

Keys to success

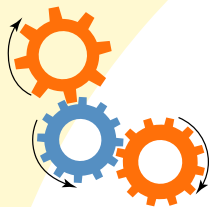
Solid **teaching preparation**.

Teach your students **basic digital skills beforehand**.

If **hybrid teaching**: work in **small groups**.



Benefits



Students benefit from **the explanation if you record lessons step by step**. They see the **process**.

It allows **teachers to set up virtual lessons remotely**, which would not have been possible without the tablet. It was also beneficial for **the content and quality of my overall** course, because it stimulated me to revise everything while recording the lessons.



My students **learnt faster**, especially during the revisions in small groups.

Ready ?

I started recording my lessons, because at that time many students didn't have a computer. They only had a smartphone.

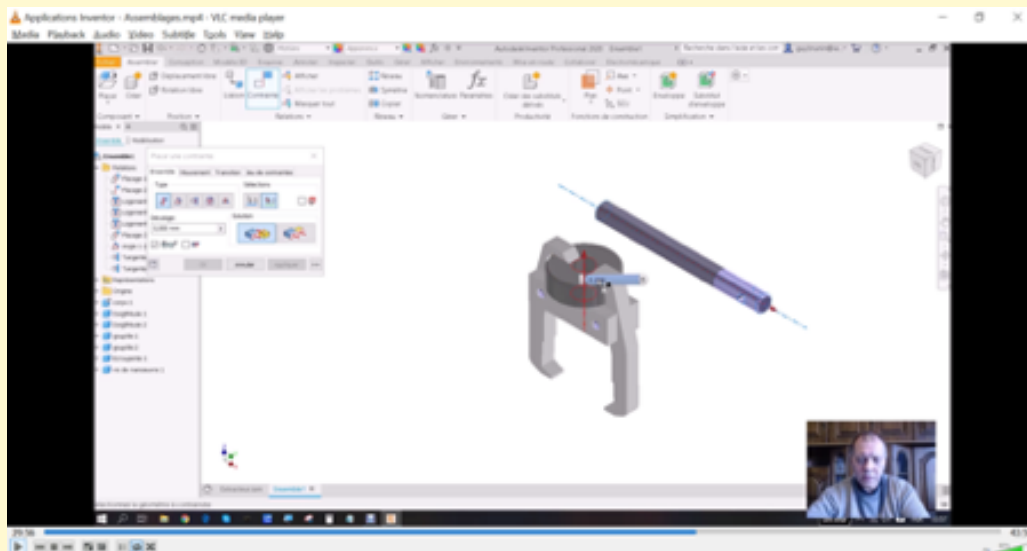
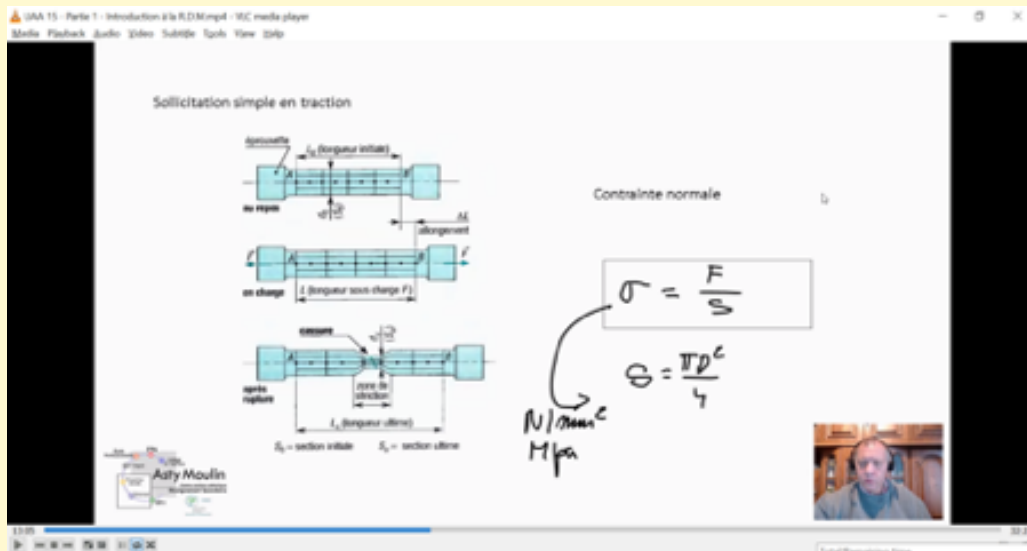
It's very easy to record yourself while teaching. But it requires much more preparation than a lesson in class. I prepared thoroughly, I read my notes again and again before the video recording, to know how to sequence the different things, to remind myself of important things to tell the students in my video.



Resources

Screenshots

Screenshots of theoretical technics lessons with the tablet



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.