



EXPLORING THE CREATIVE USE OF TABLETS IN SCHOOLS

CASE STUDIES – SCENARIOS IN PRACTICE



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Case Study Schools

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2. Slovenia, High School Gimnazija Jožeta Plečnika, Ljubljana, Simona Granfol
3. Austria, Nnö Informatik-Mittelschule Stockerau, Peter Stöckelmaier
4. Italy, IIT Giordani Striano, Naples, Daniela Cuccurullo
5. Portugal, Agrupamento De Escolas De Freixo (Freixo School Cluster), Pedro Correia
6. United Kingdom, Cramlington Learning Village, Northumberland, Phil Spoors
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8. Portugal, Colégio Monte Flor, Carnaxide Oeiras, Rui Lima
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10. Belgium Wallonia, Athénée Royal D'ans School, Ans Near Liège, Sandrine Geuquet
11. Czech Republic, Zs Dr. E Beneše School, Petra Boháčková

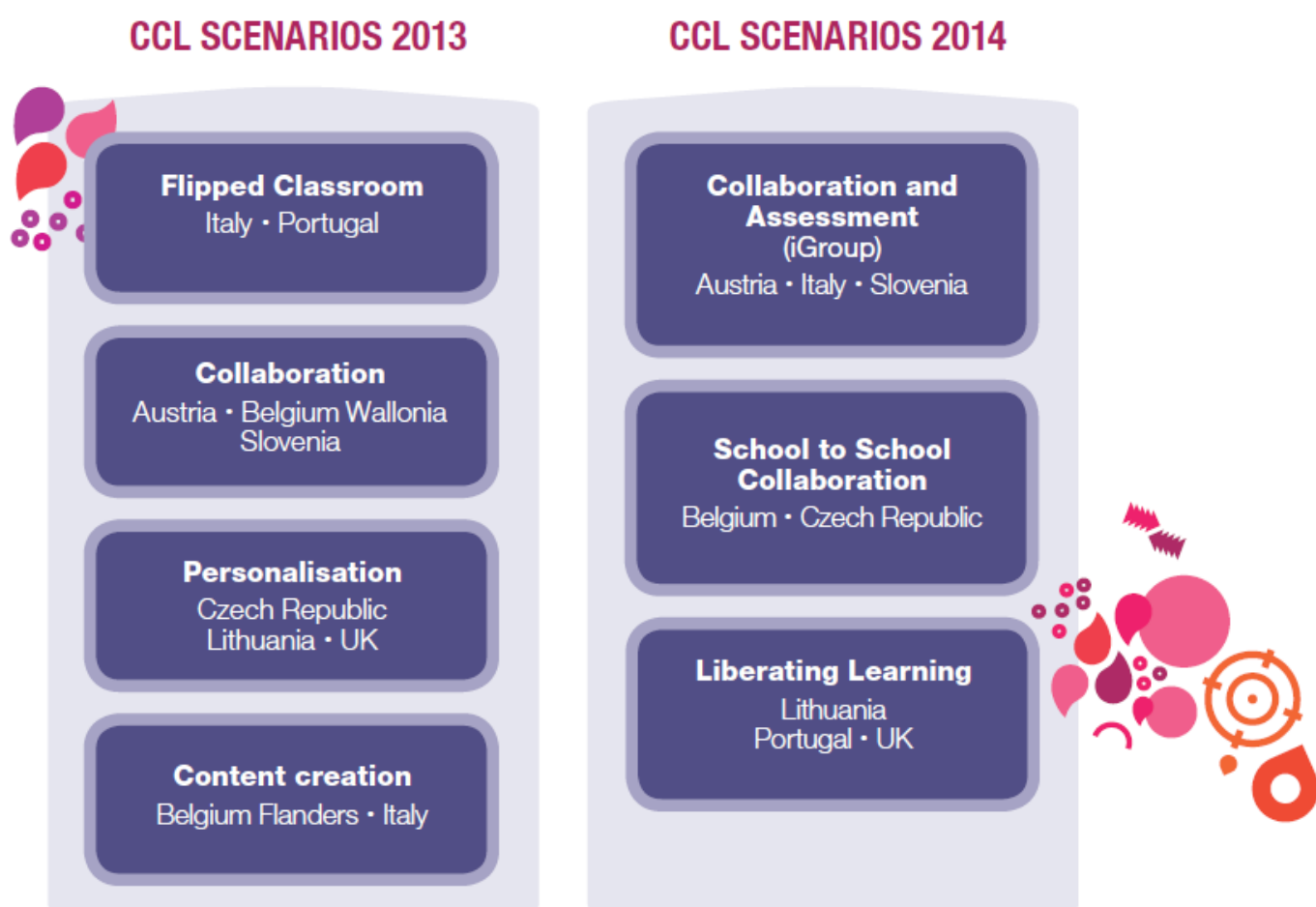
Table of Contents

Scenarios in Practice	4
Content Creation Belgium Flanders	5
Collaboration Slovenia	7
Collaboration Austria.....	10
Collaboration & Assessment (iGroup) Italy	12
Flipped Classroom Portugal	15
Personalisation United Kingdom.....	17
Personalisation United Kingdom.....	19
Liberating Learners (Independent Learning) Portugal.....	22
Liberating Learners Lithuania.....	24
School to School Collaboration Belgium Wallonia	26
School to School Collaboration Czech Republic.....	28

Scenarios in Practice

In this document are the case studies from each country participating in the Creative Classrooms Lab project. During the course of the project, seven different scenarios were developed by the policy project partners and the lead teachers. The case studies complement the final report from [Observation and Documentation of Practice](#) (deliverable D4.3).

After initial exploration of the hot topics and common challenges involving the implementation of technologies, the following scenarios were produced:



Each case study gives some background information on the school involved and addresses how the CCL project teacher implemented the policy scenario in practice.

The CCL project teachers developed learning activities using the different phases of **Dream, Explore, Map, Make, Ask, Remake** and **Show** as outlined within the scenario development process. Further information about the scenario development process and the seven different scenarios created within the project is available on the project website: creative.eun.org.

At the end of each case study, the CCL teachers have given their own top tips for experimenting and developing the use of tablets in the classroom.

Content Creation | Belgium Flanders

MIDDENSCHOOL, YPRES

CCL PROJECT TEACHER: PHILIP EVERAERTS

The aim of the scenario was to move from the use of traditional or simple digital textbooks towards enabling the students to create interactive digital books. In this scenario the idea is for students to create interactive digital content, for example a video, a game, a presentation, a learning module or even an app that can be used by others. Students thereby become 'prosumers': producers and not just consumers of content, and learn about the processes and pitfalls of designing and creating content in an authentic, real-world problem-solving context. One of the key aims was to motivate and engage students to be more actively involved in creating content.



Middenschool, Ypres, Belgium has 190 students from age 12-15 years; it is one of four schools across a large campus. Middenschool, Ypres has 9 Smartboards, 50 PCs and 36 iPads. There are four classrooms that can be used for iPads, there is a basic Wi-Fi network and Airserver is used to share audio and video. In this school, access to the tablets is on a timetabled basis.

Philip Everaerts is the CCL project teacher and takes responsibility for teaching two subjects in school. Firstly, he is a technology teacher and uses digital textbooks and supports students to create their own material; this also involves the use of design and technology tools. The students can use tablets, but equally make use of tools including saws, screwdrivers and cutters. This year students choose their own apps to deliver the end product. The school has focussed on the CCL scenario 'Content Creation'. The second subject is 'Active learning with ICT'; there is no national curriculum for this subject but a small team of teachers has developed the content for the school looking at the use of ICT across the curriculum. Philip has now linked this work closely with the scenarios on content creation and collaboration. Every course is delivered by the teacher using iBooks and iTunesU.

The students have 'Active Learning with ICT' for 2 hours a week. The students have been introduced to the work of the CCL project and understand the different stages: **Dream, Explore, Map, Make, Ask, Remake** and **Show**. The teacher has created new digital learning resources and activities for each aspect of the learning story. One of the significant differences with this scenario is that the teacher has chosen to rotate students through various different activities. This has helped to ensure that the students had enough access to the devices.



One room in the school has been converted into an "Active Learning Room." This is a large space that enables the students to have access to a range of devices including PCs and tablets. However, the desks can be moved and arranged in various ways to allow the students to work in groups of different sizes. The teacher is able to give the students access to other technologies and tools in a designated area of the room.

The students have to create their own iBook about communication over a series of lessons using Creative Book Builder. The students can access the activities as an iBook. The teacher has created videos for the students to watch and they then copy the same tasks. One of the advantages of the different sections is that the teacher can rotate through some of the activities over a number of weeks. This means that the students can organise their own learning and work at their own pace. Every lesson begins with a briefing so that the teacher is able to check on the progress of the students. The students also have to share their work on the school's Virtual Learning Environment.

The students get a list of competencies at the beginning of the task and they know are going to be scored against these (maximum of 4 points). One of the tasks involves the students making their own Perspex cell phone holder. (Produced by Technotrailer) The students have to watch the video and follow the steps to heat the different folds in the Perspex. During the first scenario cycle, Philip defined the APPS that the students should use for each task; however, he now believes that it would be effective to give the students opportunities to identify their own APPS and to become more responsible for deciding the format of the outputs for their actual tasks.



At the beginning of the project, Philip felt that it can be difficult to motivate other teachers in school. This is because some teachers need more confidence with the technology. However, he has found it helped to work with a small team in school to look at how to improve learning and teaching using technology. Philip has worked across the school to build a small group of lead teachers. These 6-10 teachers meet regularly to discuss developments in learning and teaching using technology. As ICT co-ordinator, Philip is given a number of non-teaching hours per week to provide training and support for other staff in school.

Students like being able to work on different activities. One of the challenges can be that it does take more time for teachers to create the 'outline shell' of the work, but Philip has found that he can also engage the students in the process. It can be a considerable challenge for teachers and students to use tablets because it can take longer to create a meaningful end product. The teacher has highlighted the importance of smaller tasks within each lesson to enable the students to build an evidence portfolio across different aspects of work.

Top Tips from this teacher

1. Try and dare to fail
2. Do not use too many apps
3. Act as a coach

Collaboration | Slovenia

HIGH SCHOOL GIMNAZIJA JOŽETA PLEČNIKA

CCL PROJECT LEAD TEACHER: SIMONA GRANFOL



The purpose of this scenario was to encourage all students to collaborate and contribute to create a product to achieve the learning outcomes. At a policy level, there was recognition that students should take more responsibility for a role within their own learning. This could lead to different students doing various types of tasks with their peers. Policymakers recognised that students need to develop essential 21st century skills and be given the opportunity to be engaged in collective problem solving, social learning, peer to peer interactions leading to improved communication and interpersonal skills. In terms of resources, the scenario suggested that teachers and students should use web based resources which can be accessed via tablets or individual devices, and also presentation tools that students can use with their tablets.

The aim was to encourage the teachers to facilitate the learning in a more supportive role and to be aware of how the students learn. The teacher had to provide regular guidance to the students on how to improve their work and encourage them to reflect on their progress. The aim was that the teacher should use the tablets to record evidence of the students working together to inform their teacher assessments. It is important to note that the students were expected to be involved in some individual tasks to demonstrate their understanding as well as participate in co-operative group work.

In Slovenia, High School Gimnazija Jožeta Plečnika is located in the centre of Ljubljana and draws students from all over the city. There are 870 students between the ages of 15 and 19. There are four grades with seven classes in each grade making a total of 28 classes. The average class size is 30 students. This school has one mobile ICT classroom which means that 25 laptops can be brought to the classroom by students. The school has a wireless internet connection and also provides access to Eduroam.

In 2010, one group of students was identified as a "Netbook Class". Since 2013 the school now has two



groups of students with access to netbooks. Last year (2014) the first netbook generation took part in the national exam Matura and after getting official results from the national agency, the netbook class was identified as having the best results in the school.

Simona Granfol, a CCL project lead teacher who teaches German to 33 students who do not have tablets, but they do all have access to a netbook. However, the most important consideration here is that students have access to an individual device. The aim of this was to encourage the use of ICT in all subjects for this specific group of students.

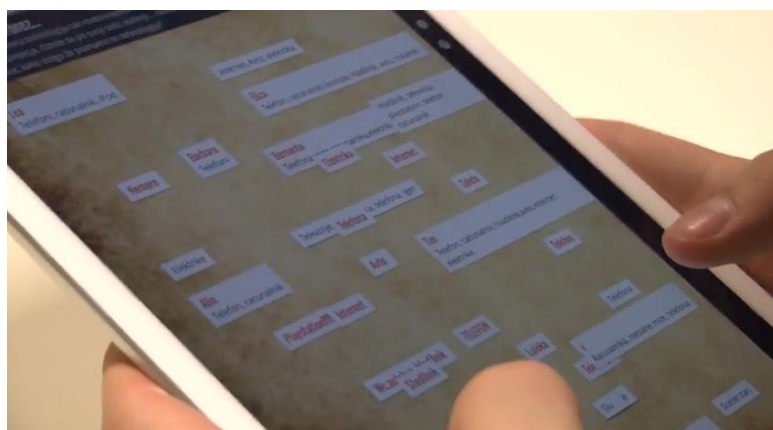
The students sit in groups of four. The teacher presents from the front of the classroom using an interactive whiteboard. The teacher has chosen to organise the learning in this way, to enable the students to work individually or collaboratively in smaller groups according to the task. Throughout the lesson, the teacher refers to materials on the virtual learning environment.

Simona begins the lesson with a quiz on [Karl Benz](#) that she has prepared and saved on the school VLE. As part of the CCL project, the teachers in Slovenia have been working on a scenario on collaboration. Simona has shared all the stages of the scenario with her students. Today she revisits the “**Dream**” part of the scenario and shows where the students’ initial ideas came from.

The teacher shows the students a video about German inventions; Aspirin, BMW, Beer, Levi Strauss and Haribo to name but a few. It is fascinating when you start to think about what has been invented in a particular country. The teacher then shows the students a second video about Karl Benz and how he developed the car and the brand.

The teacher then divides the students into groups with three or four students to undertake their own research and create a presentation on a German invention. This is the “**Make**” part of the scenario process. In the “Make phase”, the teacher felt that it was helpful to have a two parts to the task one part that is more subject driven and students don’t have too much possibility to lose focus and one part, when they can show their creative potential. This helped the teacher to be certain that there is visible evidence of their “learning”.

The students are allowed to decide the software application that they want to use for their presentation. Some of the students choose PowerPoint, or Prezi, but the teacher also introduces the idea of [Glogster](#) or a [Wordle](#).



Each group has to make a questionnaire with a set of questions so that other students can watch their collaborative presentation on German inventions and then answer the questions. The teacher takes responsibility for deciding which students should work together to ensure that they can collaborate with each other. The teacher asks the students to allocate roles within the group.

- 1 person is responsible for a slogan/advert
- 1 person will find the information or the invention and collate it in a Google doc
- 1 student will write the quiz
- 1 student will create the presentation

The teacher has found that a standard 45 minute lesson is not enough to create something useful and has therefore used a double lesson for this part of the scenario. However, the students soon get to work as they know there is a lot to do. The double lesson allows the students time to think and discuss their ideas. The teacher is able to go around and support each group. One of noticeable advantages of this task is that not all the students are doing the same thing; the students know that they have to remain focussed on their task as the teacher will be looking at their individual outcomes. The information that is collated in the Google doc is accessible by the whole group and this will mean that the students can all see each other’s work.

One of the biggest challenges is to implement individual good examples across the core areas of the curriculum to encourage all teachers in school to make effective use of technology. At a school level, CCL lead teacher Simona Granfol has encouraged team teaching. The starting point was to establish connections among courses through the ICT tools, while at the same time project group tried to systemically develop an all-around competence of digital literacy.

Simona has also been one of the teachers trialling the use of IRIS Connect and has now begun to use this to support other teachers. This means that she can record herself teaching and upload this to a shared space for other colleagues to watch her lesson.

Training is provided by the National Education Institute in Slovenia. There are subject networks and access to advisers who can give specific guidance about how to implement ICT across the curriculum. There are online webinars each month at a national level and these are free for teachers to participate.

Top Tips from this teacher

- 1. Think about how to formulate the task for the students:**
 - **What is the learning?**
 - **What is the anticipated outcome?**
- 2. Try to stick to one app in connection with a specific way of working – don't use different apps every lesson. If possible, give students the opportunity to choose the program they are going to use for learning.**
- 3. Collect feedback from your students on a regular basis, especially in the beginning of introducing new approaches, apps, methods etc. The digital knowledge of the students is often wrongly understood – they do not know as such about ICT then we assume or they have different kind of ICT knowledge – according to their interaction with digital media outside school.**
- 4. Develop new ways of working with ICT together / in cooperation with other teachers in the classroom, so that you introduce and work with ICT (methodology) in a similar way and that students can use steps from work in one lessons also in other lessons – teacher can develop together guides for other teachers to access.**

Collaboration | Austria

NNÖ INFORMATIK-MITTELSCHULE STOCKERAU, AUSTRIA

CCL PROJECT TEACHER: PETER STÖCKELMAIER

NNö Informatik-Mittelschule Stockerau, Austria is a public school located near Vienna; it has approximately 200 students aged 10-14 years old. Throughout the project there has been a team of four teachers working on the goals and objectives of the CCL scenario on Collaboration. Teachers at the school identified that they wanted to use tablets in lessons in an effective way and to increase the motivation of students.



The school has three computer labs equipped with approximately 25 PCs each. There are four interactive whiteboards in the school. All other classes and rooms are equipped with laptops (LAN, Internet), beamers and speakers. All students have their own device (netbook), which is purchased from their parents in the first class. At the beginning of the CCL project one class was equipped with Samsung Galaxy Note 10.1 Tablets and the Samsung School solution which includes screen sharing and learning management software and a 65" LED screen.

Peter Stöckelmaier is the CCL project teacher, but importantly, there is also a class tutor, Claudia Bernstein team teaching within the lesson too. During the Link Observation Visit Peter uses the Samsung School solution and asks the students to log in and establish a connection with the large screen. The students log on and write a note or draw on their tablet to show that they can communicate with the board. The objective of this lesson is for the students to learn about the "lever rule". The students have to begin by answering questions and sending in their responses. There are six questions and the students can work at their own pace. The teacher examines the responses with the students. The students are also able to see their own individual results. The students are given the correct answer and a pie chart so that they can see the percentages of the other students who got the same questions correct.



In the next part of the lesson, the teacher draws a diagram of a see saw and one person on each side. One person weighs 13kg whilst the other weighs 78kg. The teacher talks about the difference between the weights of the two people and asks what will happen. The teacher then shows the students how to calculate this in Newtons. He also explains the experiment using real equipment. The teacher then sends the students a chart from the main PC attached to the LED screen with information missing. The students receive this via their tablets. The class tutor explains how the students should work for the tasks. Some students experiment with the practical equipment whilst others do the

same investigation on the Samsung tablet. Both sets of students have to record their findings on the electronic worksheet that has been sent to their tablet via the Samsung School. There is no printer from

Samsung, so the teacher cannot print the students work, but the students can put their work in Dropbox and print it at home. The students experiment with different amounts in grams. In the plenary, the teacher and the class tutor recap the results and the teacher ends by showing how to write the conversion from newtons to kilograms as an equation to show the leverage. In the plenary, the teacher gives the students a hypothesis, and asks them “What would happen if...?” The students are able to use the calculator to work it out. This has been an important lesson to observe because it emphasises the importance of giving students opportunities to work with real science resources as well as technologies. The CCL project has encouraged the teacher to plan more collaborative activities and yet still maintain time to develop students’ individual knowledge.

The school is part of a National network called ENIS and this means that the teachers can work with other colleagues in Austria on the implementation of tablets in school. The school has also benefitted from having four project teachers who have taken responsibility for cascading the work of the project across the school. The team of teachers found working with tablets very different to working with netbooks. To assess collaboration during the lesson, one student of each group makes a time-lapse video from the work in the group. The students have to write a short protocol, which should show the work of the group and their own task in the group. One of the biggest differences was that the students were unable to type too much because they were not familiar with using a touch-style keyboard on the tablets. The school has adapted some activities to accommodate this by encouraging students to draw, and make handwritten notes on content that can be shared.

Top Tips from this teacher

- 1. If you want to use mobile phones, tablets or notebooks (BYOD) in your lessons just make little and simple steps.**
- 2. If you use digital devices in your lessons and some problems arise, don’t give up. In such situations it helps to have substitute preparation for the lesson.**

Collaboration & Assessment (iGroup) | Italy

IIT GIORDANI STRIANO

CCL PROJECT LEAD TEACHER: DANIELA CUCCURULLO

In the second cycle of scenarios the aim was to build upon the work on 'collaboration' and begin to explore how to track the progress and assess the work of an individual student involved in collaborative learning. The teacher should also be able to evaluate the overall group performance. The initial narrative of the scenario also encouraged the teacher to give individual students roles within the tasks. The teacher has to encourage the students to reflect on their learning and give final feedback discussing targets and competences of individual students including their ability to interact with peers as well as to demonstrate critical thinking through analysis and presentation of new learning materials.



IIT Giordani Striano is in Naples. The school is a technical institute with four different branches of studies: ICT, Chemistry, Mechanics and Electronics. Students are aged 14-19. The school merged with another school two years ago. There are almost 1300 students in the school.

The CCL lesson observation was with CCL lead teacher for Italy, Daniela Cuccurullo and the 5th grade students aged 17, who largely came from the previous school where they had already been involved in a national initiative called Classroom 2.0.

At the beginning of the CCL project, Daniela wanted to:

- Learn how to make the most of handheld devices
- Have a chance to discuss evolving practice with other teachers
- Get practical examples of best practice as models to share in other contexts



The teacher wanted to use the learning scenario to teach English for specific purposes. The school has adopted the CLIL (Content and Language Integrated Learning) methodology; this means that the English language teaching is integrated into the specialist subject – in this case Science. The teacher has focused the work of the CCL project with a particular group of students. The students do not have access to the tablets beyond the lesson time. However, all of the students have their own mobile device and access to the internet at home. The students can use their mobile phone in class for learning purposes.

In the lesson observed as part of the CCL observation visit, the students know that they are at the “**Create**” phase of the scenario.

The lesson begins with the students sitting at desks laid out in a horseshoe shape around the interactive whiteboard and the teacher. The students all had access to a Samsung Galaxy Tab 4.

Prior to the lesson, the students have had to research alternative forms of energy and focus on one in particular. The teacher begins the lesson with a video, the students watch the video and the teacher then asks the students to contribute to a LINOIT about the different kinds of energy sources. The students readily give responses and the teacher begins to target some students with additional questions; for example, how does a solar panel work? What are the advantages and disadvantages of solar panels? (It soon becomes clear that the students need to have done their research prior to the lesson.) The teacher moves on to a discussion about renewable and non-renewable energy sources and again the students share their understanding. This section of the lesson is dependent on the students being able to draw upon their prior knowledge from lessons in the science labs as well as their own flipped learning at home. This means that the teacher can use the time to focus on their English skills. The teacher’s role is critical here to ask questions, identify the progress of individual students and make formative assessments before moving to the next part of the lesson. During the next 15 minutes, the students then share their work and prior learning, but the teacher steers their responses to guide the next stage spontaneously. Whilst the students are not currently allowed to take their tablets home, all of the students have prepared something digital to show that they have completed their flipped learning task. Some students have also brought their own mobile device to the lesson and they can use this throughout to support their learning.



In the second part of the lesson, the teacher has created a webquest that she has shared with the students via Edmodo. The task is for the students to create a learning app, a chapter for a wiki, a Popplet or a Glogster to demonstrate their new knowledge on different forms of energy. The teacher uses RubiStar to enable the students to write their own assessment criteria for the task. The rubric can then be downloaded or printed so the students have a checklist for their work. (Title, Content, Accuracy, Attractiveness, Audience, and Appeal).

The students rearrange the desks into groups of four to collaborate on their product. The students discuss their work in Italian, but the end product has to be in English. The students now have the rest of the lesson and next lesson to “create” their resource.

Daniela has identified that it can be a challenge to have reliable access to the internet. One solution would be to provide a Wi-Fi access point in some of the teaching rooms as well as the labs.

It can be a challenge to motivate students to do activities at home to prepare or extend their learning. It has been important to encourage some of the students to become “tutors” to support other students in class who are not so confident with using the technologies. Teachers need formal and informal chances to meet and share their work in progress. This school has a group of teachers who work together to share new ideas.

Top Tips from this teacher

- 1. From time to time stop and reflect about the scenario, the lessons, the students and the teaching/learning process; try modifications and see what works and what does not.**
- 2. Try not to be inundated with the wave of the apps; handle them through a careful and select them following the steps of the scenario.**
- 3. Enhance peer classroom observation using mobile technologies and share your reflections with colleagues.**

Flipped Classroom | Portugal

AGRUPAMENTO DE ESCOLAS DE FREIXO (FREIXO SCHOOL CLUSTER)

CCL PROJECT TEACHER: PEDRO CORREIA

The aim of this scenario was to introduce the students to the concept of the Flipped Classroom. This was to encourage the students to make more use of their time at home for class preparation and to enable them to make better use of their time with the teacher. The policymakers were keen to understand how introducing the Flipped Classroom might support the student to connect home and school encouraging the student to take more responsibility for their learning. The idea was that students should be encouraged to watch videos, make notes and to begin to develop new resources to support their own learning at home prior to the lesson enabling them to use the lesson time to explore content further and to collaborate with their peers and their teacher on more challenging ideas.



Pedro Correia is the CCL coordinator in the Agrupamento de Escolas de Freixo (Freixo School Cluster). Freixo School is a public school which includes kindergarten, primary school and a lower secondary school with a total of 800 students from 3 to 16 years old. There are 75 teachers at the school. The school identified that the work of the CCL project would be focused within one eighth grade class. (12-13 year old students)

The school has access to a vast range of technologies including PCs, interactive projectors and whiteboards. There are also at least 6 digital video cameras. The school provides all students, parents, teachers and staff with a school email account which is the main communication channel in use. Moodle and OneDrive platforms are commonly used in the school learning activities. The school has also been identified by Microsoft as an Innovative Pathfinder School within the Partners in Learning programme.

The initial goal was for the 18 students to use a Flipped Classroom scenario with all their teachers across all 14 subjects. To implement the Flipped Classroom scenario, the school used the "PUPIL 108" Windows 8 tablet (known locally as Magalhães) with Office 2013. All 18 students were able to take the device home as well as the teachers.

The school had to define common ideas for all staff. The teachers found it a completely different teaching and learning environment. Teachers had to be aware that some students came to lessons unprepared and had not completed the tasks required. The students were also aware of the different skills of the teachers and the types of activities that they had to do during their lesson time. The students liked biology lessons because the teacher gave them quizzes or asked them to make a poster.

The CCL project teacher explained that in a typical lesson, students were able to share their achievements and knowledge acquired at home. For this, the teacher proposed some activities such as group discussion about the main ideas of the topic. Sometimes the students had to answer quizzes or online questionnaires. Teachers used Infuse Learning and Windows 365 Excel tools. The school has had some difficulties with the internet connection which compromised the development of some planned

activities. Thus, from a certain point it became necessary to always have activities on paper that would make it possible to "replace" the online resources if there was failure. From time to time the students were asked to present to the class the results of their learning in the form of posters or PowerPoint presentations. Students frequently used Office 2013 resources. In some cases teachers chose to subtitle short films taken from YouTube. During the lessons, the teachers helped with the creation of individual presentations, assisting on questions and validating the conclusions reached.

An interesting example was the subject of physical education, given its essentially practical nature the teachers felt that it did not initially look as if it would be possible to implement the flipped classroom scenario. The CCL teacher, therefore, proposed that the students study the rules and technical movements of the sport "Korfball". Students, in groups, produced videos / tutorials on the various technical aspects of Korfball. They shared the videos on the OneDrive platform, serving as a technical document for their study. After this approach, the teachers found that students were involved more dynamically during classes and took an active role among peers with more practical difficulties, correcting the technical "skills" and the playing movements.

The teachers felt that using the tablets in this way had improved student and teacher communication during the lesson time. Students were allowed to learn at their own pace and teachers could spend more time supporting students in class. However, teachers also felt that implementing the Flipped Classroom was time consuming and that it was extremely challenging to find appropriate resources in Portuguese.

Top Tips from this teacher

- 1. Don't be afraid and believe in what you are doing!**
- 2. Sometimes not all students will fulfil with their tasks at home and you will want to give up Flipped Classroom. At that time think that in the traditional method of teaching also not all students are aware of the class and performing the required tasks.**
- 3. Having a device with access to the internet in the middle of the class can be tempting and distracting for students. I think it is not worth to police trying to prevent less suitable uses, let them know you are aware that they can do this but that will have to carry out tasks within a set period of time and with quality.**

Personalisation | United Kingdom

CRAMLINGTON LEARNING VILLAGE, NORTHUMBERLAND
CCL PROJECT LEAD TEACHER: PHIL SPOORS

The main focus of this learning scenario was to design activities that meet the needs, competences, capabilities and learning preferences of individual students. The UK CCL schools had a particular focus on narrowing the attainment gap and focused on students from challenging backgrounds. They were interested in looking at how access to a personalised learning environment through use of tablets (at home as well as in the classroom) has an impact on students' learning and helps to engage them in their education.



Cramlington Learning Village is a large secondary school in the North East of England and caters for students 11-18 years old. Phil Spoors is Assistant Head teacher (e-learning) and CCL project lead teacher for the UK; he has implemented the learning scenario on personalisation into his trans-disciplinary units with year 9 students.

This school is now in the fourth year of a one to one mobile device scheme. This scheme involves giving each student the chance to use a tablet both inside school and at home. The scheme currently includes students in years 7, 8 and 9 (ages 11-14) and the school also operates a 'Bring Your Own Device' scheme to the 6th form students (ages 17-19). The scheme runs with the support of the parents who contribute towards the cost of the devices and also work closely with the e-learning Foundation, a charity set up to help put ICT in each student's home. In this school all students have their own device. At the time of the CCL observation visit, each student was equipped with a Samsung Galaxy Tab 3. (7").

In the lesson that was observed as part of the CCL project, the students began by scanning a QR code which linked to a survey. The teacher collated the data centrally, but also the students were able to see what others were writing. The students have continued to use paper to draft out their project. As this class is made up of two tutor groups (over 50 students) then the mobile technology offers a way of collating survey results which simply could not be collected, interpreted and acted upon within a single lesson otherwise.



This classroom has round tables around the edge of the classroom with access to two PCs on each table, though these are not used during the lesson. In the centre of the room, the teacher has arranged three rows of chairs for the students to use when they are working as a whole class at particular stages of the lesson.

In the second part of the lesson, the teacher brought all the students back together in the middle of the room to talk about how to give appropriate feedback. He asked the students how they would give feedback

and collates their responses in a PowerPoint. This will be placed on the class blog for later reading. The teacher shows the students a video of an amateur band playing a famous song and the students have to give feedback on the performance. The teacher then asks for a student who is willing to share the draft work and models how to give appropriate feedback. This part of the lesson aimed to draw out how to be specific and constructive in feedback. It highlighted how simply telling the band “It didn’t sound good” isn’t really of help to them. Providing supportive, specific advice to explain why and what could be improved does. The existence of a specific class blog facilitates the instant recording and sharing of the discussion for later use by every student in the class on their 1:1 device.

In the final part of the lesson one student is responsible for sharing their paper draft, whilst another student gives feedback. The third student in the group has to video or record the interview in some way, the student is allowed to decide on the most appropriate tool. The role of the third student is ‘observer’. Their job is to comment on the way the feedback was provided from one peer to another. This focuses the subsequent conversation on the process of providing and receiving high quality feedback and encourages a dialogue between the three students on this rather than just the actual work under discussion.

In all lessons, the learning comes first, followed by the use of tablets as appropriate. In this particular case students were approaching the ‘ask’ phase of the project cycle and, as such, it was important they understood how to provide and take on board constructive and useful feedback/critique. This lesson was very much about training the students on this approach. The fact that the mobile devices have a video camera offers an opportunity to capture feedback discussions which would not have existed without the use of the technology. The use of video to review feedback conversations allows students to take control of the critique and feedback process and facilitates the subsequent reflection on how well this has gone so that it can be constantly improved.

These students have worked through the scenario process stage by stage and the lead teacher has suggested the apps and tools that the students should use, but equally the students have developed an increasing independence to make their own decisions about when and how the technology is used.

Top Tips from this teacher

- 1. Keep learning central - what 'learning' do you want to happen? Only then think about how mobile technology can be applied and whether it is relevant.**
- 2. Don't get too focused on specific apps. There is nothing wrong with using specific apps or teaching them but the important thing is to think about what you want to achieve first and then look to see if there is an app/tool which can support this. If not, create one or do something which doesn't involve the tablets!**
- 3. Play to the tablets strengths. They are fantastic for communicating and collaborating, for capturing/sharing/feedback, for research and for allowing extremely fast access to specific resources (e.g. using QR codes). Remind everyone using them that they are not a PC - whilst there is some overlap in terms of what tablets and PCs can offer they have some very different strengths and weaknesses!**

Personalisation | United Kingdom

PENWORTHAM PRIORY ACADEMY, PRESTON

CCL PROJECT TEACHER: LISA COWELL

The aim of this scenario was to encourage the teacher to implement a more personalised approach for students. The plan of the scenario was to encourage the teacher to be more aware of the students' individual learning needs including their speed and style of learning. The idea was that the teacher should be able to tailor the resources for specific students and to provide appropriate feedback and evaluation opportunities. The suggestion was that by giving students access to a personalised learning pathway, this can lead to improved student motivation, self-esteem and better academic achievements. In this scenario, the teacher aimed to develop skills of self-discovery, curiosity, effective research, framing (re)search questions.



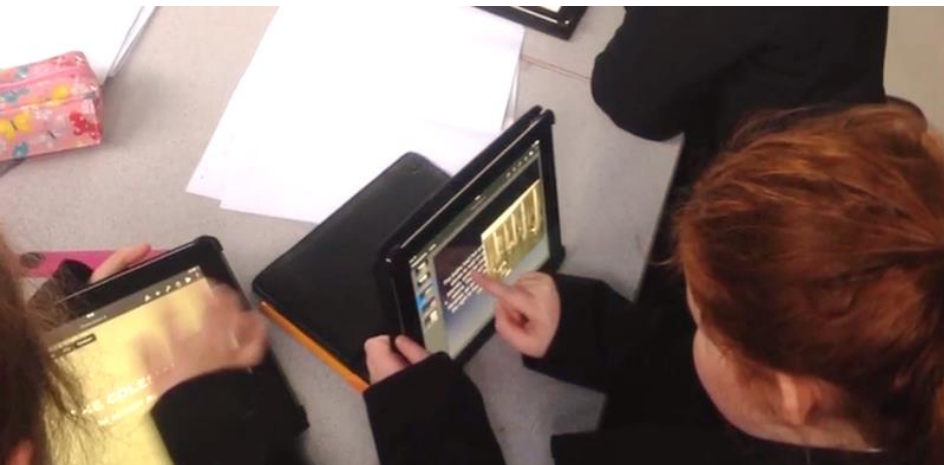
Penwortham Priory Academy has 600 students from 11-16 years. The school started a 1:1 scheme to introduce iPads with a trial class in May 2012. Following this trial, the school provided iPads to all staff in June and July 2012 and went on to issue iPads to students in September and October 2012. The scheme was initially funded through the e-learning Foundation with parents making a charitable donation on a monthly basis so that the iPads can be used in school and at home. The scheme still runs in a similar way with parents contributing on a monthly basis but the school now administers it. When year seven students join the school in September, they have the opportunity to opt into the scheme. At the beginning of the CCL project there were three year groups of students using an iPad on the one to one scheme. Now, all year groups have iPads. The current year 7's have iPad minis and other year groups have the larger model. The school is currently going through a program of equipping many of the classrooms with Apple TV and will gradually phase out PCs. It has retained interactive whiteboards.

Staff and students can make their own decisions about which apps to use on the tablets. However, the school has introduced "Showbie" across the school. This was initially combined with iAnnotate PDF or Adobe writer but, as the app Showbie developed, the designers incorporated annotation tools which have negated the use of other apps in conjunction with Showbie. Showbie works like a Virtual Learning Environment and allows the teacher to create a virtual classroom, to comment and to feedback on student work. It means that the school can access evidence of students' digital work in a portfolio.

Lisa Cowell is the Deputy Headteacher and the CCL project teacher. Her focus for this work is with the year 7 nurture group. These students have been identified because it will allow the school to address how to look at personalisation of individual learning needs and many of these pupils have low levels of literacy. In this History lesson, the teacher is focussing on developing the "ask" section of the scenario. The teacher said: "I'm particularly interested in the 'Ask' phase of the learning as I'd never considered making reference to an expert as part of a scheme of work before."

The teacher introduces the students to different roles within the feudal system. Prior to the lesson, the teacher has spent considerable time preparing videos using Aurasma that bring each picture to life with a voice describing the main description of each role. Whilst this set of videos may have taken a little

while to prepare, it is well worth the end result to see the students engaged in the activity. Some of the students may struggle with writing simple sentences and the teacher has used the technology to make the content of the lesson accessible and fun. The teacher has also prepared a Keynote file for a student who has English as a second language. This will allow the student to visit each part of the classroom – listen to the Auras in the same way as the other students and then do a drag and drop exercise to label the different roles in the feudal system. This activity allows the individual student to be able to access the content at his level.



Although this school has been using iPads for some time, there is still the clear expectation that the students will do some written work in their books. In this lesson, all students are expected to write down the learning objectives and the teacher also asks them to do a short written activity. This means that the student has something to refer back to; it also means that the teacher is able to assess the written progress

as well as the practical progress. The written work also quickly reveals the level that the student is working at.

One child in the class speaks very little English and is able to participate in the lesson through the use of a personalised “Keynote” that the teacher has developed. He is tasked with ordering the characters within the feudal system having been given translated versions of narratives. He is also encouraged to engage with the Auras to pick out key words in English. The teacher ends the lesson by revisiting the learning objectives and talking to the students about the key vocabulary within the lesson. It takes the students a significant amount of time during the lesson to listen to each video, but they do this independently. Aurasma appears to help the teacher bring the learning to life. The teacher also takes a photo of the students work and this is stored in the students’ file on Showbie. This is now recognised as the evidence portfolio for digital work across the school.

Lisa has identified that one of the most important aspects of professional development is for schools to give staff opportunities to learn from each other. Staff are regularly given time at staff meetings to share ideas and help each other. There is a ten minute “Show and Tell” every week for staff to share what works. One of the challenges can be to ensure that all students have access to devices. This school has invested in some additional cheaper tablets that can be loaned out to students in lessons. The teachers also try to make sure that there is still access to other computers in teaching areas. The teacher has encouraged students to use their smartphones in class and at home to make sure that resources are accessible.

Top Tips from this teacher

1. **Learn from your students.** They often know more about the technology and value being consulted and listened to.
2. **Create different learning environments.** If students want to create video content, they're going to need space and to be away from other groups making noise. Have lots of break out space. Consider and change the layout of rooms and buildings where you can.
3. **Have a back-up plan.** If Wi-Fi and internet connection let you down, what will you do? Be prepared for every eventuality, but that doesn't mean printing loads of stuff, just know what you could do instead.
4. **Insist the students find the approach, app, outcome that is right for them** - if you need to assess their understanding of a topic, does this have to be a hand written piece? If not, let their creativity shine through; encourage podcasts, websites, animations, films, a song.

Liberating Learners (Independent Learning) | Portugal

COLÉGIO MONTE FLOR

CCL LEAD PROJECT TEACHER: RUI LIMA

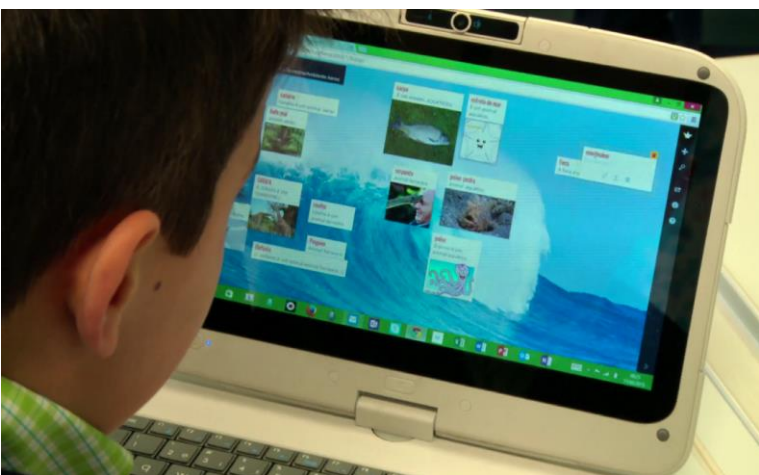
The aim of this scenario in the second cycle was to build upon the work around personalisation and independent learning with the use of the tablets. The policymakers agreed that key aspects of the learning activities should involve: “The development of independent learning and thinking skills through real life (authentic) tasks and learning beyond the classroom walls.” It was anticipated that students should be involved in understanding more about themselves as a learner and the ways in which they learn.



One particularly important aspect of this scenario is that the teachers in Portugal have used the VARK questionnaire to ascertain the students’ learning styles. (Visual, Aural, Reading and Kinaesthetic). All of the CCL project teachers in Portugal believe this has been incredibly important and provided essential advice to both teachers and students about the ways in which the students learn. The teachers have been able to adapt the content and the activities to personalise the learning for the individual needs. The teachers have used the information to help to organise the groups for the collaborative work.

Colégio Monte Flor is 40 years old. It is an elementary private school with 220 students (from nursery to 4th grade - 1 to 10 years old) located in Carnaxide, Lisbon, Portugal. The school has a vision to promote 21st century skills and to prepare students for life in the world. Rui Lima is the CCL project lead teacher for Portugal; he is currently the school pedagogical co-ordinator and is a class teacher with 2nd grade students aged 7 years.

Rui has aimed to fully implement the scenario development on liberating learners in his classroom. There are 25 students in the class. The topic is animals and during the lesson observed as part of the Link Observation Visit, the students are at the ‘create’ phase of the scenario. The lesson takes place in a new area of the school called the Learning Lab, located on the lower ground floor; this is a large vibrant



space with round tables which can be moved. There is also plenty of space for the students to work on the floor. At one side of the room is a PC area with four tables each with two PCs. In the left corner of the room, there is a large screen connected to an Xbox and in the right hand corner is a Promethean interactive whiteboard.

The wall at the end of the room is blank and this means that the teacher/students have a clear space to project their work. Each student has their own Magalhães device, (a hybrid, Windows device with a

tablet screen that turns), but as the students are working collaboratively only five of them are in use. (These are hybrid, windows devices with a tablet screen that turns.) Students are working in small groups in various applications, PowerPoint, Popplet, Mindmaps in M8, Stop-Animation with Movie Maker, and Kodu. On the interactive whiteboard is a world map showing where some of the animals originate. In one corner of the room is a Promethean Activtable and Rui has created an activity to categorise the different animal classifications. (Birds, Reptiles, Insects, Fish, Mammals etc.) On the Xbox, Rui identifies four students to play "Zoo Tycoon" – the children have to create a zoo and decide the animals to go in the zoo.

There is a lot going on in this classroom at the same time, but this teacher is an expert with the technology and confidently uses the space and time to allow the students to work independently. However, he is also very aware of how the students are progressing. The students are free to move around and some students take time to do another task whilst others concentrate on the presentation. With twenty minutes to go, the teacher stops the students and says that the students must be ready to share what they have presented when the time is up. This focus on time gives the students a reminder of targets and expectations. The teacher moves around all of the groups supporting the students with their presentation, but also asking them to spend time on the Xbox or Activtable to ascertain their individual understanding.



At the end of the lesson, each group has produced the start of a presentation, but they all look very different reflecting not just what they have learnt, but how they have been learning too. As part of the implementing the Liberating Learners scenario, Rui wanted "to challenge the students to reflect on the way they learn, promoting a more independent learning process, but at the same time, making them understand we have different learning styles and that we can learn in different environments and using different types of resources. Using the tablets has enabled students to access different tools and apps that can meet their needs and their favourite learning approaches."

Top Tips from this teacher

1. **Keep it simple. Be sure you motivate your students with challenging activities and projects, but sometimes it's better start with simple projects, and then get more and more ambitious.**
2. **Believe in your students and challenge them to explore different apps, different resources and different ways of solving problems.**
3. **Don't give up. When we work with technology, sometimes it is usual to have technical issues and students do not always respond as we expect them too.**

Liberating Learners | Lithuania

VILNIUS JESUIT HIGH SCHOOL

CCL PROJECT TEACHER: ANTANAS DZIMIDAVICIUS

The aim of this scenario in the second cycle was to build upon the work around personalisation and independent learning with the use of the tablets. The policymakers agreed that key aspects of the learning activities should involve: “The development of independent learning and thinking skills through real life (authentic) tasks and learning beyond the classroom walls.” It was anticipated that students should be involved in understanding more about themselves as a learner and the ways in which they learn.



Antanas Dzimidavičius is a CCL project teacher and a physics teacher at Vilnius Jesuit High School. This school is an independent Roman Catholic (Jesuit) school and has approximately 700 (age 11- 19) students. The school has three computer labs. At the beginning of the CCL project, the school implemented a Samsung Smart School classroom sponsored by Samsung with 28 tablets, keyboards, and a large LED screen. The integrated Samsung screen sharing and class management software enabled the teachers and the students to exchange data with each other.

Antanas has focused the development of the scenario with one class of students who are 13 years old. These students have access to the Samsung tablets just once a week in Physics and only occasionally for other lessons. At the moment, access to the tablets is only within lesson time. Students are allowed to bring their own devices for lessons and use them for learning at home.

The teacher wanted to produce different ways for the students to learn the material and allow the students to choose the one that should be the most suitable for them, to give them more freedom using tablets and allow them to be more responsible for their learning. The teacher planned for the students to have the opportunity to make videos, to blog and to interact with new digital content rather than traditional textbooks.

In the Physics lesson observed as part of the CCL project, the students are working in pairs, but each student has access to a device. The teacher begins by showing the students the learning objectives for the lesson on the measurement of volume. The students must use their individual devices to access various tasks using a QR Code. The first QR code provides a link to a quiz to check how the students' knowledge from the previous lesson. This allows the teacher to gather feedback quickly and evaluate student progress. The students complete this at their own pace within a Google form prepared by the teacher. Students can wear headphones, and they are asked to bring their own headphones to use. The students also have a link to the 'subject content' on slides. The student must answer the questions and then save their work to an appropriate file to share with the teacher on Google Drive.

In the final task, the students need to find the volume of a book. They have to take photos and make a video saying what they are doing at each step. This is a challenge because some students are competent with the use of the tablet, but need support with the subject knowledge; however, several students also need support with the use of the tablet. In this situation, it might be useful to put the students into small

teams with dedicated roles within the lesson, i.e. dividing the tasks to ensure that students who have more digital skills can support the less confident students. Some of the students use an application called Explain Everything to create their short videos explaining their calculations.

Top Tips from this teacher

- 1. Don't be afraid to experiment!**
- 2. Introduce more creativity by allowing students to choose their own app for task completion.**
- 3. Collect and store all material in the Cloud**
- 4. Share, share, share...**

School to School Collaboration | Belgium Wallonia

ATHÉNÉE ROYAL D'ANS SCHOOL, ANS NEAR LIÈGE
CCL LEAD PROJECT TEACHER: SANDRINE GEUQUET



The aim of this scenario was to explore School to School Collaboration. Policymakers were keen to for teachers to explore how School to School Collaboration could enable students to develop teamwork, understanding of cultural differences and language skills. It is important to note that the aim was for teachers to collaborate and plan together. The focus is to encourage the students to learn from each other and communicate their ideas particularly on topics that may require debate or extended discussion. The policymakers identified that the scenario should enable the teachers to explore two key advantages of using tablets: use of multimedia and mobility of the device.

The idea of the scenario around School to School Collaboration was to use the tablets as a tool to improve communication and collaboration between schools, regardless of the distance. It was also to enable the students to share content, knowledge and feelings about learning easily.

Athénée Royal d'Ans school has 1000 students aged 12-19 years. The school has 8 computer labs and 30 rooms are equipped with interactive whiteboards. One of the main challenges for the school is connecting to the Wi-Fi. This is largely because the school is a collection of lots of small buildings and one large main building. The school has made substantial investment towards providing access to technology for teachers and students.

The school has been involved with a national project called "École Numérique" - ("digital school") since 2011. As a result of this, the school has received 120 iPads, one for each first year student aged 12 years. The iPads currently stay in school and this means that access can be distributed across all students.

Sandrine Geuquet is CCL Project lead teacher in Belgium Wallonia and a French teacher at the school.



Sandrine wanted her students to enjoy writing literature reviews and share their ideas about books they have read. She said: "I want my students to be autonomous in using tablets in the way they want to learn, choosing the app/website that suits them to improve."

This school has used the learning scenario ideas to develop several projects around collaboration including:

Project n°1: students have to collaborate and to share their literature comments about books they've read (for themselves and for the French courses). They have to post those critiques on a literature social network (Babelio).

Project n°2: Students from the History classes and students from the Latin classes want to create together a website. They want to share information through this platform, collaborate to build their knowledge about Antiquity.

The teacher chose to trial the collaboration with another school in Belgium Wallonia as this was the first time that they had been involved in school to school collaboration. The following information gives an outline of the different phases of the scenario process and considers the amount of lesson time for the activities:

- **Dream:** How to work with students from another school? What do you think it's possible to do? - (1x50 minute lesson). Students decided to talk about and to share their readings. They thought it could be easy to share a website.
- **Explore:** Students searched the easiest way to build a website. Finally, they picked "Weebly" – 20 minutes.
- **Map:** Students opened a new website and invite the teacher from the other school (IET Charleroi). Afterwards, students designed the "Home page" with information they wanted to appear on it. (1x50minute lesson) They also thought about pages they need to have on the website.
- **Make:** Design of the website, writing portraits, reading books... Posting productions on the Weebly (4x50 minute lessons) and waiting for commentaries. Comments were used to exchange with others.
- **Ask:** "It's difficult for us to talk about our reading. Most of the time it's not the true reflection of what we've experienced..." Let's think about how to share our feelings in an accurate way. (1x50minute lesson)
- **Re-make:** Some students decided to make videos (trailers) (2x50 minute lessons) and post them.
- **Show:** www.ccl-ans-charleroi.weebly.com

The teacher worked with the students to build a website to share their feelings about reading, books and identified literature. The students challenged each other with quizzes and games online. The idea of the collaboration was to enable the students to enjoy writing a literature review and to share their ideas about books that they have read. The students made trailers to encourage other students to read a book that they have enjoyed.

The teacher recognised that working with tablets enables the students to be much more autonomous because the teacher can assign different tasks to different students. However, because of this, there is a need for the teacher to be much more prepared for the lesson.

Top Tips from this teacher

1. **Don't be afraid to be creative... (almost) everything is now possible.**
2. **Trust your students; they can be creative to find solutions.**
3. **Keep on involving new teachers in this new opportunity to teach differently.**

School to School Collaboration | Czech Republic

ZS DR. E BENEŠE SCHOOL

CCL LEAD PROJECT TEACHER: PETRA BOHÁČKOVÁ

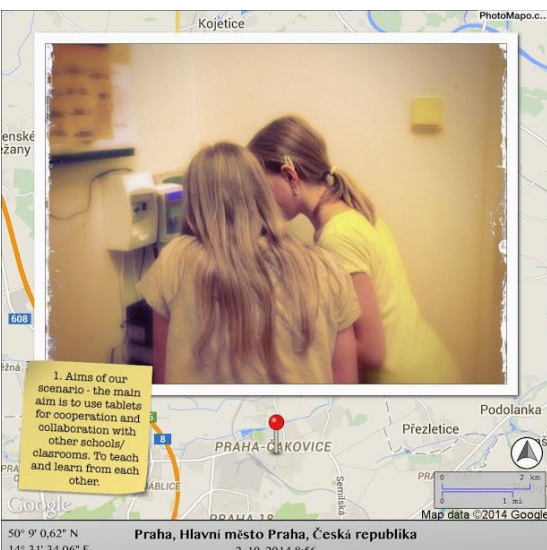
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ZS Dr. E Beneše School is located in a suburb of Prague, Czech Republic. There are more than 800 students from 6 to 15 years. The school is equipped with three computer labs, interactive whiteboards in most classrooms and 47 iPads. The Wi-Fi connection is freely available across the school and students are also encouraged to bring their own devices including tablets, mobile phones and laptops.

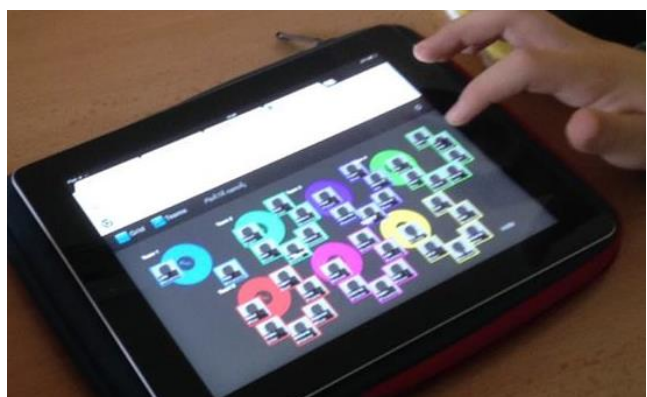
Petra Boháčková is CCL project lead teacher for the Czech Republic and a Physics and English teacher at ZS Dr. E Beneše School in Prague. The implementation of the scenario has involved a class of 25 students who were 13 years old. The aim of the project was to look at how the use of tablets can facilitate **school to school collaboration**. A link was established with ZŠ a MŠ Drietoma, Slovak Republic. Students were able to communicate and collaborate using Twinspace via the e-Twinning portal. In each classroom, both sets of students had access to an individual device. However, these devices belonged to the school and the students did not have access to the devices beyond the lesson time. During the course of the scenario, the classroom was organized in various ways and fundamental to this work was the opportunity for the students to work in different learning spaces.

The two schools chose to work on a project in Physics lessons and the plan was for the school to school collaboration to take place over the course of one year. The title of the project undertaken by the students was "Everything flies even without feathers." The aim was to explore the mechanism of flying by making paper planes, measuring distances of flying them, measuring velocity and making manuals to demonstrate the processes. The students were able to test their planes in a large open space and this meant that they could successfully measure the distances.



The teacher separated the activities across the different phases of the scenario development process:

- In the **Dream** phase, the two groups of students established all the different areas that they could cover on the topic of 'flying'.
- In the **Explore** phase, the students were able to explore existing information in textbooks and manuals to look at different ways of making paper planes and the mechanism of flying.
- In the **Map** phase, the students were able to share their ideas together and video conference between the two schools.
- In the **Make** phase, the students made different paper planes.
- In the **Ask** phase, the students were able to fly their paper planes, measure the distances and consider the mechanism of flying.
- In the **Remake** phase, the students were able to make one manual together.
- In the **Show** phase, the students were able to have a conference with parents and a video conference with the partner school.



At the beginning of the project, the teacher identified that teachers in the school did not know how to use the tablets and tended to introduce them as digital textbooks only. Throughout the course of the project, Petra Boháčková and a team of teachers at the school have been exploring how to use the devices creatively. In particular, Petra has encouraged teachers to join learning communities and social networks e.g. Twitter to learn about useful applications for specific subjects. As lead teacher, Petra has kept details of useful resources in both English and Czech to share with other teachers. Petra has recognised the importance of demonstrating to teachers the advantages of the tablet as she feels that they are "fast, easy to work with and mobile."

Top Tips from this teacher

1. **Be as creative as possible.**
2. **Try to show various possibilities of using tablets for learning,**
3. **Do not worry, if something goes wrong – we are learning through our mistakes.**



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