

# BUILDING LEARNING LABS AND INNOVATIVE LEARNING SPACES

Practical guidelines for school leaders and teachers

## Case study TURKEY

Feride Bekçioğlu Secondary School, Pursaklar



This case study complements the European Schoolnet's publication "**Building learning labs and innovative learning spaces - Practical guidelines for school leaders and teachers**" (2019). Find the full report and other case studies here: [fcl.eun.org/guidelines](https://fcl.eun.org/guidelines)

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## Background and Inspiration

Feride Bekçioğlu Secondary School in Pursaklar, one of the oldest metropolitan areas, about 10 km from the centre of Ankara, opened in 2003. It is staffed by a manager, three assistant managers and 64 teachers. There are 1,122 students. The school aims to help its students to develop into self-confident, successful and happy individuals with sporting, artistic, social and critical thinking skills. It also aims to develop entrepreneurial knowledge that is sensitive to the needs of society and to different viewpoints, taking lessons from the past and looking hopefully towards the future.

In Turkey there is one lead FCL Ambassador (Sümeyye Hatice Eral) plus 18 local FCL Ambassadors. Can Erdoğan, one of these local FCL Ambassadors, is based at Bekçioğlu Secondary School and when he attended an Ambassadors' meeting in Antalya the idea of setting up an FCL in a Turkish school came up. Can then researched the possibilities and presented to teachers and managers at his school the idea of creating a future classroom lab. He was supported by an English teacher who was looking for an Erasmus+ project idea including teacher mobility which, if successful, would deliver a course for six teachers and collaborate with an Italian school to embed ICT competences in day-to-day teaching and learning.

The school leaders and teachers recognised that they are living in a time of change and were trying to follow the latest education trends, e.g. use of games, flipped classrooms, etc. They accepted that teachers need to rethink their practice, even if they only make small changes, and that they need an appropriate space in which to experiment. Members of the school's team participated in the European Commission's School Education Gateway, joined in webinars and afterwards discussed with teachers new teaching approaches and techniques, e.g. project-based learning, and how these can be introduced.

Can was inspired by learning about the FCL in Brussels but, although he has visited EUN he had not yet been able to visit the FCL itself. To date none of the teachers have physically visited the FCL which inspired them.

## Planning

Can and the English teacher recruited a Science teacher and the ICT co-ordinator to form a project team and they presented their ideas to the school manager. Can describes the ICT co-ordinator as *"the strongest part of our project"* and, commenting on his dedication to the school, reports that *"a few years ago he personally donated a 3D printer to the school, set up a computer lab and donated some money to the school too."*

The team chose to name the project Mosaic. Mosaics originated in Mesopotamia, a region which corresponds to part of modern Turkey and, as Can explained, *"to create mosaics you need water, fire, air and earth and in the FCL all materials and approaches are used."* The team carried out some research and discussed ideas with the other Turkish FCL ambassadors. They received support and advice from the national FCL Lead Ambassador who visited many times and two university architecture students helped with the design and provided technical support for the construction of the FCL. Can also

emphasised that it is “*very important to communicate with, and take advantage of good examples from, other schools*” and that this should be an on-going process: “*I recently got an idea from another school teacher and we are now applying a similar design in our FCL.*”

## Obtaining funding

It was initially decided to use the school’s own resources to build the FCL as, although the team had sought external financial support, at first they were not successful. They decided to start by using existing equipment available within the school. However, after the team developed a 3D model, which made it easy to demonstrate what the school was trying to achieve, they were more successful. When the local authority visited and saw the model, they wanted to be involved and they invited the national authorities to help with funding too.

The team is currently looking for commercial partners to provide equipment for the FCL, to help the school to keep up with the latest trends in educational technology and to expand their project.



3D design for the FCL

## Drivers and aims

The initial drivers for the school’s FCL project were a desire to modernise the school, to improve teachers’ and students’ 21<sup>st</sup>-century skills and to embed ICT into teaching and learning. The main aims became to increase student collaboration and the effectiveness of teaching by focussing on the learner, rather than lessons being centred around the teacher. In order to achieve this, the team recognised that it was necessary to change the physical and technical environment to support and enable changes in pedagogy.

## Involvement of stakeholders in the planning process

Students were actively involved in planning from the beginning, via an art competition focussed on classroom designs, with the entries submitted informing development of the plans for the school’s FCL.

Ideas for the FCL were collected in two meetings of all the teachers and these resulted in changes to the room’s lighting and seating. The Music teacher created learning scenarios and songs for lessons in the FCL and Science teachers focussed on creating STEM learning scenarios. Parents were also invited to make suggestions during a meeting held in the FCL.

Can says: “*It is important that we unite stakeholders around a journey of transformation; if people don’t agree the school will be an unhappy place, it helps to keep them involved.*”

Interestingly, some student designs did not include technology at all and one idea, which was incorporated into the final design, was a drama stage. The team consider the drama stage to be very important especially for shy students. It helps them by allowing them to make improvisations, present their work in different ways and generally improve their presentation skills. As the space available for the FCL is large, equivalent in size to two normal classrooms, there was enough room to install the stage at one end of the area for presenting and exchanging information and ideas.

### Stakeholders' engagement

The team continue to involve students and parents in their plans and activities via social media and the local news. Face-to-face meetings with national authorities are also used to spread information and share news. Information, photographs and examples have also been shared with teachers attending a national meeting organised by the Turkish Ministry of Education, including teachers from many other schools interested in setting up future classrooms.



*The drama stage within the FCL*

## Implementation

The process of setting up the future classroom was led by a group who specialised in different aspects: Can led on pedagogy; the Turkish FCL Lead Ambassador helped with the learning zones; and the school manager managed the construction aspects of the room. The FCL is still very new, having opened in September 2018.

### Convincing other teachers

Some teachers thought that it would not be possible to run lessons in the FCL as classrooms are usually crowded and that it would be too noisy in the FCL. The team discussed this with them and convinced them there would be less noise if students are busy and really engaged in their work. The argument was: if students are passive learners, they get bored and start to talk. In the FCL, students working in groups or pairs are allowed to talk about their project and, therefore, they talk less about other things. The English teacher commented that she found it easier to deliver lessons successfully in FCL than in a normal classroom.

### Teacher training

The team arranged initial training and on-going training for the school's teachers, all of whom expressed willingness to change their teaching methods. There were three training sessions with 60 teachers from the school and other local schools. The agenda for these sessions included flipped classrooms, 21<sup>st</sup>-century skills, FCLs, digital education solutions, e-learning courses, the European Schoolnet Academy and Turkish online resources. Not all teachers were immediately confident about

using the future classroom or the technologies available. These teachers were involved in small projects at first. They discussed them projects with the ICT co-ordinator and received advice and support. Three seminars were arranged for teachers. In one of these teachers played the roles of students in order to test lesson ideas, practise scenarios and experiment with chroma key green box technology, furniture and using a variety of technologies in the classroom. There is a WhatsApp group for FCL teachers which Can says "allows them to share ideas at all times of day and night, even at midnight!"

## Technology

Technology in the FCL includes many different kinds of equipment including robotics, mobile devices, eBook readers and a 3D printer as well as animation, logo, poster, cartoon and video editing software. For robotics, the school's FCL does not include robotics kits; instead, students and teachers make all the parts of the robots, some using the 3D printer and some using other materials, e.g. wood. The Ministry of Education has involved the school in an educational technology project which includes the use of interactive whiteboards. It is too early to judge the impact of the FCL on use of technology elsewhere in the school.

## The physical space

The school team created six zones for different activities, using different technologies and tools reflecting the six zones in the Brussels FCL. Several teachers wanted to make more flexible learning spaces for their subjects. These included the Music teachers, who wanted to set up an area as a music room and the PE teachers who wanted to make a special area for their activities.

<p style="text-align: center;"><b>Create</b></p> <p style="text-align: center;">Chroma key (green box), cameras, video editing software, sound recording devices, animation software</p>	<p style="text-align: center;"><b>Interact</b></p> <p style="text-align: center;">Interactive white board, laptops, mobile devices, learning response systems</p>	<p style="text-align: center;"><b>Present</b></p> <p style="text-align: center;">Reconfigurable furniture, projector, drama stage, quiz tool, online publishing tools</p>
<p style="text-align: center;"><b>Investigate</b></p> <p style="text-align: center;">Data loggers, microscopes, robotics, 3D printer, 3D modelling, online laboratories, programming</p>	<p style="text-align: center;"><b>Exchange</b></p> <p style="text-align: center;">Moveable collaborative tables and boards, projectors, mind mapping software, brainstorming tools</p>	<p style="text-align: center;"><b>Develop</b></p> <p style="text-align: center;">informal materials, mobile devices, games, working corners, audio equipment, headphones, books, e-books</p>

*The Learning Zones*

It is too early for the FCL to have had a substantial impact on space design in other school classrooms and areas but it is already clear that some teachers would welcome this.

Different types of lighting are needed in different zones and areas, e.g. spotlights help in the green box area. Noise was not a problem but the old classrooms had small windows so these were enlarged to allow more daylight in. The school also introduced some plants to create better air quality in the FCL and it is planned that students will plant and take care of plants including flowers and herbs that they can use.

## Summary of the steps taken to create an FCL

Can summarised the steps as:

- First analyse the situation – what do we have that we can use? how can we do it?
- Design the FCL
- Disseminate to the authorities
- Obtain financial support
- Continue with construction
- Write learning scenarios with the teachers and evaluate them
- Implement the scenarios with the students

## Start-up phase lessons learned

Can's team have learned:

- The relationship between the project team and the authorities is key
- You need a team of staff who are enthusiastic and can think outside the box
- When teachers see other teachers using equipment and approaches that work for their subject and their students, they realise how important the FCL is
- The students are very eager to use the FCL, *"they keep asking when is the next lesson in there?"*

## Using the FCL

There was no pilot phase. The FCL has been available to all the teachers from the beginning and they all use it, including teachers working with students who have special educational needs. Can observes: *"We have great technologies that the students, not just the teachers, use actively. We teach the students how to use the technology and give them chances to make small projects and to make mistakes. They make better projects than the teachers."*

Some teachers are already integrating imaginative technology-supported elements into their practice. A science teacher found a detailed photograph of a cell and with the chromakey, the green box/green screen technology in the Create area, she was able to seem to be inside the cell indicating and describing all the parts of it to her students. The students can share in this type of experience or in other subjects, e.g.in history, they can use technology to "become" a character in an appropriate location. The students can use their imagination and the 3D printer to create many different things. They can also express themselves and be creative on the stage or use robotics and sensors.



## Technical support

The team report that they need some technology to be repaired sometimes but *"with the new laptops and other devices now we have no technical support needs."* In future the school hopes to attract commercial sponsorship and project funding which will help with replacement and additional equipment as well as necessary repairs.

## Impact

### The benefits of the FCL

The perceived benefits of the FCL observed by the school are:

- Provides different types of learning outputs
- Improves multiple intelligences
- Students can make real things and use them
- Students can work more creatively
- Students can be responsible for their own learning.

### Differences in the environment and pedagogical approaches

Although the FCL is new the team has observed:

- Students are now more active in the learning process
- In traditional classrooms students cannot use personal devices but now they use them in the lab
- Students can also work collaboratively and multi-disciplinarily and use their imagination
- In the traditional classrooms the outputs are very limited but in the FCL students can create different work and outputs, both digital and non-digital.

## Improved teacher collaboration

The FCL is helping to improve teacher collaboration, especially when teachers work in the FCL together.

## Research

The school is not currently carrying out or collaborating in impact research. However, it is piloting some national projects and may contribute to research related to these.



## The future

### The space and beyond

The school is planning a new enlarged green box (chromakey) area in the current FCL and planning to open a new FCL next year, if sufficient funding can be obtained.

After the school started setting up its FCL, the Ministry of Education gave all the students new laptops and planned a national level Erasmus+ project around the idea of building a Science Park in the school.

### Scenarios and CPD

New learning activities with students include a plan to grow organic vegetables in the FCL. The school plans to create a pool of all the future classroom scenarios developed by its teachers to share with a wider group of teachers locally and nationally.

Then, in the summer 2019 break, two weeks of teachers' events are planned in collaboration with other schools in which school staff will both provide and receive training. The school team will share



their experiences of using the FCL and the learning zones effectively and learn from what others are doing.

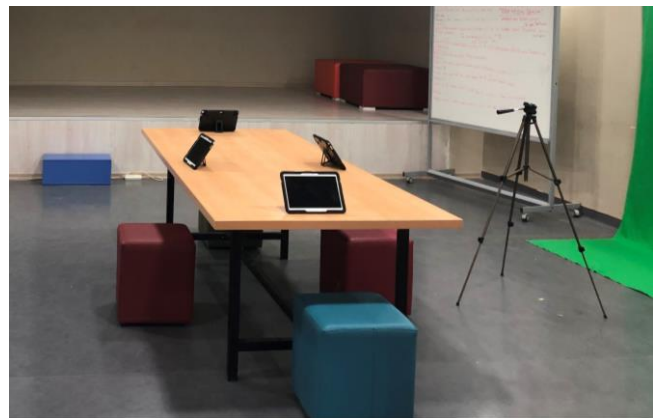
Next year (2020) the school will host a fair to present digital and non-digital outputs of students' learning in the FCL.

### Desired additional support

The school currently hosts visitors from other schools to learn about FCLs including looking at the design and observing lessons and hopes it will soon be possible for it to be one of a network of Turkish school FCLs learning from and supporting one another.

### Three key pieces of advice for other schools

- Dream
- Act
- Follow us – *"If they contact us we can help them set up their learning labs and we can share all our ideas."*



## Information about the publication

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