

The Challenges of Implementing Innovative Learning Environments



CEB support for education in Seine-Saint-Denis

Expenditure for education infrastructure was around €46 billion across the EU in 2016, representing 6.5% of the total expenditure for education. The CEB actively supports education infrastructure investments in its member countries, devoting an average 11% of its annual financing to the sector.

The Department of Seine-Saint-Denis in France benefitted from the CEB's financial support to expand and renew its lower secondary education infrastructure. This major investment programme has provided a large number of students with access to new, modern facilities, well-equipped with IT resources, to sports infrastructure, and to catering areas.

In addition to making financing available for infrastructure investments in the sector, the CEB is committed to further promoting an effective link between infrastructure investments and learning outcomes. For this purpose, a team of CEB experts carried out a thematic review of recent education investments carried out by the Department of Seine-Saint-Denis. Their findings point to some of the challenges that governments currently face in their efforts to develop innovative learning environments.

A detailed account can be found in *School Design and Learning Environments in Seine-Saint-Denis, France*, available at www.coebank.org.



Promoting the pedagogical potential of buildings

Today, more and more schools are conceived as learning environments rather than just a collection of classrooms. They are increasingly being designed as spaces that promote learning everywhere. They support the concept of differentiated learning, meet students' individual needs, and move away from teacher-centred learning approaches.

New learning spaces offer a place to work individually or in small groups and facilitate exchanging ideas, finding information and developing new concepts in a relaxing and comfortable environment supported by technology.

It is in these less traditional environments that discussions, collaboration, online research, gaming activities, mentoring and student presentation of their work to their classmates are more frequent.

These informal areas for learning, both within the group space and in the shared common areas, facilitate the development of new pedagogical practices that promote student-centred learning.

To make the most of the pedagogical potential of these new learning environments, teachers need to be supported in the transition to the new spaces. Taking the time to appropriate them is key to making effective use of their potential to support student learning.



Capitalising on the pedagogical potential of IT

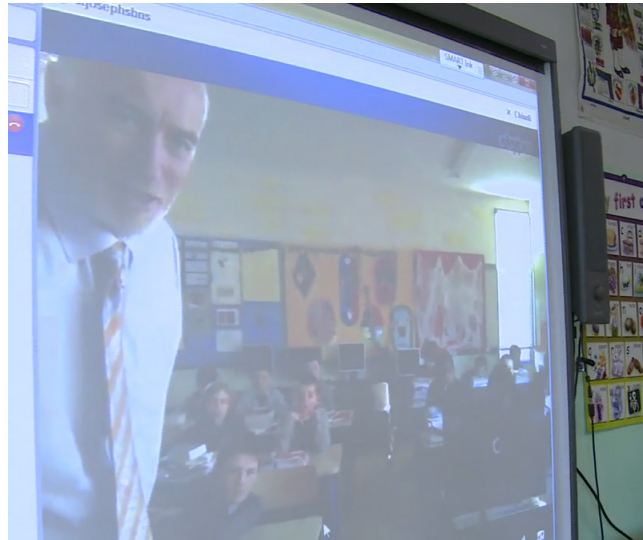
Most new schools today are well equipped with IT resources. Innovative uses of information technologies offer the possibility to create new tasks and activities that were previously inconceivable in a traditional classroom and which give a more creative role to the student.

For example, instead of presenting the conclusions of a report in writing, students can now make use of a video, or a slideshow with an original music soundtrack.

Modern technologies facilitate internet-based collaboration and promote the use of applications for the sharing and remote editing of contents. By using sensors, data loggers, and hands-on dynamic systems, students can work on science-related topics by interacting directly with outside world materials and manipulating variables and values.

Moreover, interactive whiteboards enable students to communicate with experts and schools in other countries, while exploration labs of the latest generation (such as Makerspaces) support other innovative uses of technology.

However, in order to use the available IT resources effectively and to their full pedagogical potential, teachers need to have the necessary professional support to adapt and develop their teaching practices.



Developing school identity and belonging

Allowing students to autonomously use the different spaces in a school contributes to developing their sense of belonging and ownership of the buildings, which is an important element of their wellbeing in school.

Having a common space large enough to accommodate the whole school community for special events and moments during the day fulfils the school's need to create a sense of identity and belonging that goes beyond the team spirit between classmates. Such spaces are not always foreseen in schools. Upon close scrutiny, auditoriums prove to be places of little use while incurring a cost that is not justified by the benefits they can offer. The school's atrium, canteen, or sports hall are usually large enough to be used as multi-purpose spaces.

Designing school spaces as multi-purpose environments that can be adapted to various functions contributes to more efficient use of the space and to a reduction in costs. Flexible furniture is also essential to ensure this type of versatility.

These large common spaces also offer the opportunity to present and share the school's values, identity and personality in a way that makes everybody entering the space feel welcome and included. School identity is reflected in the personalisation and decoration of these spaces, which contributes to developing a sense of identity and belonging for all its members.



CEB Advice on Implementing Innovative Learning Environments

A new school as an opportunity to develop a new vision for education

- Involving users in the design of the premises at an early stage and throughout the process until the premises are completed ensures that the premises will meet the needs of users and that users will be satisfied with the facilities, furnishings, and equipment.
- User participation in the whole process, from the needs assessment up to completion of the building, takes more time than a usual construction project, but this investment in time and resources has proven to be profitable and has become common practice in many countries. More than anything, this process has proven useful in developing a new education vision and in promoting new pedagogical practices.
- The effective use of the new learning environment and the realisation of its full pedagogical potential depend on each school community fully appropriating the spaces in order to reach their own educational, didactic, and cultural objectives.
- Developing a feeling of belonging to the school and the personalisation of the new spaces is also an ally to promoting respect for the building and preventing vandalism. Giving time and resources for this ownership process to take place, even under a single standardised school design model, is important.

Spaces that promote learning everywhere

- Promoting student-centred learning requires overcoming the idea of a school as a set of closed rooms (classrooms for daily teaching, laboratories for “experiments”, computer room, etc.) connected by corridors reserved only for passage.
- The overall school physical space should be conceived as an entire environment that provides opportunities for learning, as learning can take place everywhere and cannot be confined to the classroom.
- The inclusion of common spaces as learning areas increases the learning area available per student. Corridors and halls can be used as individual or group learning spaces. A large common area that can bring the whole school community together contributes to developing a school identity and a sense of belonging.
- Flexibility is key. It should be supported by furniture that eases the reorganisation of spaces, by the existence of learning areas of different sizes, and by flexible scheduling.

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