

Interactive Classroom Working Group

# School strategies for fostering students' digital competences

Practical guidelines for school leaders



## Case Study

L'Ecole du Mont sur Lausanne · Switzerland



**Case study:** EPS Le Mont - Établissement scolaire primaire et secondaire du Mont-sur-Lausanne, Canton de Vaud, Switzerland

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## Introduction

School digital strategies refer to the plans and frameworks developed by educational institutions to effectively integrate digital tools, technologies, and practices into the learning environment. Sustainable and inclusive digital education strategies require a balanced approach that considers diverse learner needs and promotes equitable access to technology. Rather than simply integrating new technologies in school practices, effective digital education strategies require a well-considered idea of how technology can improve educational outcomes, address inequalities, and support the wider educational mission of the school. It is a continuous process of identifying key priorities, allocating resources for targeted initiatives, monitoring progress, and achieving the different objectives.

This case study is one of 15 developed from interviews with members of school leadership teams who have contributed to the development of effective, sustainable, and inclusive school strategies to foster students' digital competence. The case studies focus on strategies that have successfully improved digitalisation of school and teaching practices and supported the development of digital competences in their students, in a sustainable and inclusive way. The schools are located in eight countries i.e. Czech Republic, Ireland, Italy, Luxembourg, Portugal, Serbia, Slovenia, and Switzerland. The interviews were part of research carried out by European Schoolnet's Interactive Classroom Working Group on the schools' experiences, the lessons they have learnt and the good practice they have developed. This research has informed the development of the publication 'School strategies for fostering students' digital competences. Guidelines for school leaders'. Find the publication and other case studies here: <https://fcl.eun.org/icwg>

## Context

As a multilingual federal state, Switzerland is characterised by significant cantonal autonomy and a decentralised organisation of schools. While professional schools (vocational training) and federal universities of technology are managed at the federal level, compulsory education (primary and lower secondary) is primarily the responsibility of the 26 cantonal ministries of education. With a few exceptions, the cantons and municipalities organise the running of schools and finance 90% of public spending on education.

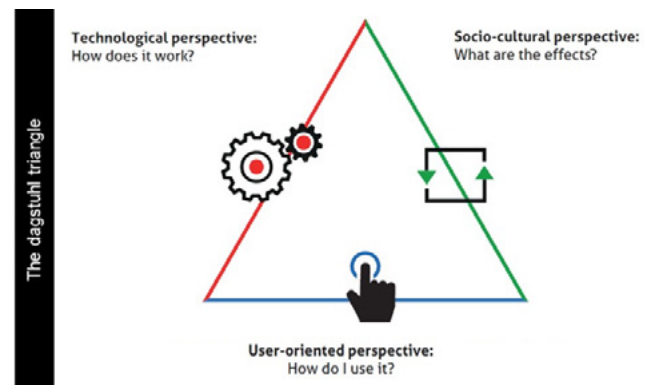
To ensure effective collaboration and coordination between the cantons and with the Confederation, there are inter-cantonal government bodies such as the CDIP/EDK at the national level, the CIIP for French and Italian speaking cantons, and three regional conferences for the German-speaking cantons. These bodies enact directives to address current educational challenges and produce guidelines to support the digital transformation of schools, including the EDK's 2018 Digital strategy and measures, which cover topics such as digital curricula, infrastructure, teacher training and support for school heads.

The regional conferences oversee the three regional curricula. The German-speaking cantons introduced their digital curriculum Media and Informatics in 2017 and have been training teachers to implement it ever since, partly through shared online content, namely the MIA Modules. The French-speaking cantons updated their previous digital curriculum in 2021 to include computational thinking and informatics. Digital education is now compulsory, with learning objectives set from the early years onwards. The curricula are built around the same concept of how technology use, media understanding and computational thinking should be taught in an interconnected manner.

The curricula's overall goal is to enable pupils to use media safely, creatively and responsibly, while also giving them their first insights into computer science. Whereas curricula, learning resources and teacher training concepts are coordinated, investment in infrastructure generally remains the responsibility of local authorities. Historically, IT was considered an integral part of a school building,

which by law is financed by local authorities, so harmonising infrastructure (interactive screens, computers for staff and pupils, tablets, etc.) has been very challenging.

Similar diversity is observed regarding the requirement for digital strategy documents from schools. While some cantons and local authorities encourage schools to develop a digital strategy, for example the canton of Zürich with its ICT Guide, such documents are rarely produced (and kept up to date) in Swiss schools. Postgraduate training programmes for school heads now include modules dedicated to developing a digital strategy as a means of guiding a school's digital transformation, so awareness and know-how are growing.



Source: [beat.doebe.li/talks/europarat19/sld008.htm](https://beat.doebe.li/talks/europarat19/sld008.htm)

### Canton de Vaud

The EPS Le Mont-sur-Lausanne is situated just outside Lausanne in the canton of Vaud. In its 2017-2022 legislative programme, the region prioritised a digital education programme in order to support society's digital transition, and launched an ambitious pilot project to:

- ▣ strengthen the digital literacy of compulsory and upper secondary school teachers (12,000 teachers) to ensure they have the skills and understanding required to educate pupils/students in an evolving digital environment;
- ▣ train the canton's 130,000 pupils/students in the field of digital education and informatics (media literacy, computer science and the use of digital tools) from the early years of primary school onwards;

- ▣ guarantee harmonised equipment and a high-performance infrastructure (Wi-Fi) for all schools from primary to upper secondary;
- ▣ make digital resources available for all school subjects.

The Department of Education put together a balanced funding package, with two-thirds of funding dedicated to teacher training and support. It brought together the area's key educational institutions, The University of Teacher education HEP Vaud, the University of Lausanne and the EPFL's Centre for Learning Sciences to develop and pilot teacher training. After a pilot scheme with 12 carefully chosen schools, the

deployment phase now aims to train and equip the canton's 93 compulsory education institutions and 32 upper secondary schools (14 grammar schools and 18 professional schools).

In parallel, the canton has developed extensive teaching resources which are now being used throughout the French-speaking part of Switzerland.

- ▣ Educational resources for primary school: Decodage
- ▣ Educational resources to teach informatics in upper secondary schools: Modulo

Regarding artificial intelligence, the canton is still determining how to manage the transition and has issued simple guidelines.

## The School



*School 1 - LeMont, Mottier*



*School 2 - LeMont, Rionzi*

EPS Le Mont-sur-Lausanne welcomes 1,200 pupils from year 1 to year 11. These pupils are taught by 130 teachers (including teaching assistants for pupils with special needs) across eight different school buildings. Le Mont is situated on the outskirts of the city of Lausanne. Whereas a few years ago the

pupils came primarily from white-collar middle-class or farming families, recent developments have led to the construction of many rental apartments, changing the school's demographics and creating a more diverse school community.

The canton of Vaud's Ministry of Education strictly adheres to the Romandie curriculum, le plan d'études romand, so individual schools cannot set any particular curricular focuses. However, Le Mont school stands out for its openness to interdisciplinary projects, particularly in the areas of wellbeing and sustainability. Thanks to this openness and an efficient management team, the school is ready to welcome innovative initiatives from the Ministry of Education. Many digital projects are initiated by student teachers from the local University of Education during their internships,

### Why this school as a case study?

Over the last 15 years, Le Mont-sur-Lausanne's schools have been a regional beacon in the field of digital technology, largely due to the long-standing involvement in digital technologies in education of both its head teacher and deputy head teacher. Thanks to the trust of the local authorities, the school has been able to continually update its infrastructure, even during periods when the Department of Education imposed a freeze on such investments.

More generally, the management team is very open to new ideas and participates in many pilot projects proposed by the Department of Education. The school is highly active in the fields of sustainability, health education and wellbeing, with an impressive list of projects proposed each year.

### School leadership team



The management team comprises one headteacher and six deputies, each with specific areas of expertise and assigned key stages. One of the deputies also serves as a digital coordinator and is responsible for steering the school's digital strategy in close collaboration with the headteacher. He has taught at the school for 23 years and has been a

facilitated by good collaboration with their practice teachers.

The headmaster, who has been in charge for 16 years, is particularly open and enthusiastic. He has built a trusting relationship with the local authorities, who are proud of their school's good reputation. They have confidence in him and are happy to fund his new project initiatives, such as the two digital and maker spaces currently being created in a new building.

This good reputation and high-quality digital infrastructure attract new teachers from the university thereby making hiring straightforward.

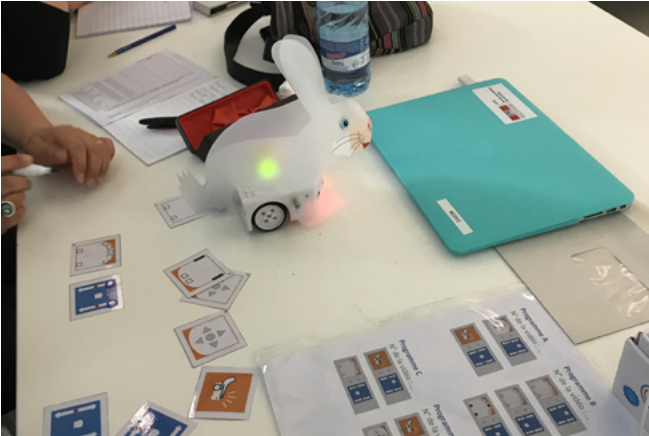
When the canton's Department of Education (DEF) launched its digital education pilot project in 2018, Le Mont-sur-Lausanne was among the 12 schools selected for the pilot scheme. The leadership team was prepared, there was a strong group of technology coordinators, and the school had good Wi-Fi and projection surfaces in every classroom. Starting in 2019, the school's teachers underwent extensive training – eight days over a two-year period – and the school received additional funding for its technology coordination team. Each teacher received an iPad with a keyboard and stylus, and five iPads were made available for each class. This equipment is now being rolled out to all classes of the canton during the Edunum deployment phase.

technology coordinator since 2005. His enthusiasm and open personality make him a key asset to the school's success.

Under his supervision is a team of four additional technology coordinators, three of whom teach digital education. One member is a teacher trainer for Key Stage 1 teachers. The most significant

feature of the team is that they were selected from different key stages. In other schools, secondary school IT teachers often accompany their primary school colleagues, which can lead to a mismatch in approaches.

## Vision-values of the school digital education strategy



While there is a consensus in the research community that a digital strategy is a key steering document to manage training, support and funding (total cost of ownership, etc.) in a sustainable way, the canton of Vaud's Department of Education has never required such a document from its leadership teams, but coaching is now available to interested schools<sup>(1)</sup>.

There are several reasons why few schools develop a strategy. On the one hand, the Edunum project provides strong guidance on how digital education must be deployed and the digital transition managed

### Focus-aims

The digital teams pursue priorities that align well with sound digital strategy good practice. For the headteacher, providing quality pedagogical support to teachers as they implement the digital curriculum is the key to success. For this reason, the principal has increased the number of hours of release time for his technology coordinators, using his budget envelope to ensure that all teachers feel supported. The digital coordination team has developed guidelines for every school year to show teachers when and how they can carry out digital education activities, ensuring that pupils systematically acquire the necessary skills during their compulsory

The team meets regularly, and the deputy reports to the school's leadership team at each of their meetings. This digital group also discusses the projects and needs formulated by the teachers to decide which projects to support and/or fund if necessary.

at the institutional level. The communication of the project's goals and ambitions has been well articulated via the steering committee, so schools do not really need their own strategy document. Despite this strong top-down cantonal incentive, each school can set its own priorities and values. For Le Mont, there is a strong focus on empowering pupils. The school's aim is not to turn all students into future employees of the IT industry, but to develop them into informed citizens of the digital age. They should be capable of understanding how algorithms work and recognising their biases, capable of protecting their digital identity and their mental and financial health in a world permeated by social networks. Parents are often at a loss when it comes to their children's digital practices. Schools have a key role to play in developing relevant and safe uses, and protecting pupils from potential dangers. According to the school head, committing to these issues also means securing the support of parents and local authorities for the school's digital strategy.

education. These guidelines help the technology coordinators to structure their work with teachers. Regarding the school's overall digital transition, the focus has been on digital communication. Three years ago, the canton chose Microsoft Office 365 as its reference suite of tools. Early on, Le Mont recognised that agreed-upon procedures and strong internal and external communication practices had to be developed to ensure successful deployment. An educational day was devoted to the subject of digital communication and the setting of limits (protocol for teacher parent interactions, etc.)

1 see examples of a [school's with digital strategy](#)

## Infrastructure and funding

In the schools of the canton of Vaud, funding for digital equipment and devices is shared between local authorities and the canton. The canton oversees the selection and distribution of digital devices and has standardised their fleet with exclusively Apple products, which is somewhat unusual for Switzerland. In most cantons, such purchases depend entirely on local authorities.

At the start of the large-scale digital initiative in 2018, an inventory of schools' digital equipment was conducted. It revealed significant disparities in equipment among the 93 compulsory schools, and even between different buildings within the same establishment. More than half the classrooms were not equipped with a professional, secure wireless network, which posed a key difficulty since the plan was to provide each teacher with an iPad and deploy five iPads and a large projection

screen with Apple TV in each classroom. There are also numerous Apple laptops and some computer rooms in many schools. All these devices are purchased and managed (selection, bulk purchase, distribution and security) by the Department of Education's technical services. This has alleviated the burden on local IT managers, who are often teachers, allowing them to rely on a highly efficient cantonal service.

Due to the trusting relationship between Le Mont's school head and local authorities, Le Mont was already well-equipped with a robust Wi-Fi infrastructure when other schools had none.

The devices and support provided within the context of the digital project have only enhanced this 'digital' advantage. While other schools are still catching up on basic infrastructure, Le Mont can now develop in new areas such as making (see 7).

## Role of AI and other emerging technologies

The EPS of Le Mont has not yet considered incorporating AI into its digital training curriculum. Although the technology coordinators and some teachers have conducted their own experiments with AI generative tools to produce images, songs and other media, they believe this is not yet a relevant topic for pupils in compulsory education. They are awaiting further guidelines from the Department of Education before embedding these tools into regular teaching.

Conversely, there is strong interest in making and STEM projects. A former teacher, now at the School

of Education, has trained 20 teachers to create artefacts using maker tools such as 3D printers and laser cutters. Additionally, two digital labs with maker spaces are currently under construction in a new school building.

The school also embraces projects from the teacher trainees who it hosts. For instance, in May and June, an art student carried out an augmented reality art project with the classes of his trainee teacher. The leadership welcomes these initiatives from young teachers as they bring fresh ideas and invigorate the teaching team.

## Added value and impact

There are several areas in which the school's digital project adds value. Regarding students' skills, the technology coordinator, who teaches digital education in secondary school, has noticed that pupils who come from primary schools have more experience and skills using digital tools. They have established routines such as logging into different interfaces, producing basic documents, sharing online resources, communicating, sending emails, etc. However, it is challenging to find evidence of students using digital tools to enhance learning (learning how to use digital technologies but not

learning via digital technologies) and becoming more critical users of technology. As this is a priority for the leadership team, it would be beneficial to devise a method for assessing learning in media education and ethical thinking.

Teachers emerged from the pilot project and the phase of online learning during COVID-19 (brief in Switzerland, from 13 March to 11 May 2020) feeling exhausted. Participants in the pilot phase were subjected to extensive online questioning and interviews which contributed to a general sense of fatigue. Nonetheless, they are very satisfied

with the efforts of the technology coordinators in organising activities and providing support.

Students are happy and proud to participate in digital projects such as the school's radio project, the production of augmented reality record covers in art, etc.

## Challenges



Although the school's digital strategy is unfolding in very favourable circumstances, the leadership team anticipates several challenges in the coming years. With the exponential growth of the municipality's infrastructure needs, financial resources are expected to become tighter. This means that projects will need to be better presented and justified, which also has its advantages.

What happens after the major department project ends is also relevant. All the teaching time redirected towards supporting teachers in their digital practices

## Sustainability and improvement of strategy

As the training scheme concludes and the digital curriculum comes into force, the technology team conducted a comprehensive survey to gauge teachers' personal use of technology, the digital activities and projects they engage in with their pupils, and the apps they most frequently use. Separate online surveys were administered for primary and secondary school teachers.

Overall, the results are positive, indicating that the investment in providing teachers with curriculum guidelines has paid off. These guidelines inform teachers on when to implement activities from the online textbooks. However, it was observed that not all teachers, despite attending the same

The extensive teacher training initiative has been carefully evaluated at the central level. However, Le Mont school lacks indicators or a dashboard to provide an overview of what has been delivered to teachers and pupils. A Selfie self-assessment, recommended at the project's inception, was not carried out.

will likely be allocated to other projects. Will the efforts made since 2018 be sufficient to guarantee the digital strategy's long-term sustainability?

Overall, the team has noticed a certain digital fatigue. More and more teachers and parents are questioning the role of digital technology in schools. It is essential to clarify that the strategy aims to promote the critical and civic use of digital technology, rather than learning through digital technology with screens ubiquitous in the school.

training sessions, implement these activities with their pupils. The most popular teaching units are unplugged activities to teach computational thinking, such as 'Square City' for years 5-6. Conversely, the internet safety activities developed for Key Stage 1 are rarely used.

Teachers at the school are immersed in a digital environment which fosters significant enthusiasm around this subject. However, too many teachers believe they have a choice regarding digital education, when in fact, the digital education syllabus is now mandatory.

Teachers have a legal obligation to ensure pupils acquire the relevant skills upon which they can build in upper secondary education where the curriculum focuses entirely on informatics.

It has now been six years since Le Mont joined the canton's digital pilot project. Although its teachers benefited from a cutting-edge training programme, the courses concluded just a few months after the launch of ChatGPT. Even an innovative training system has missed out on one of the major revolutions in the field.

For the leadership team, sustaining change despite fatigue and new projects, particularly in the field of sustainable development, is essential. For the school head, it is paramount to keep the support system in place and continue to motivate and inspire teachers. Greater coordination between different key stages is needed to ensure pupils' adequate progression in learning. So far, the school has evaluated its digital project only once, but there is a need for more tools and strategic guidance moving forward. The school head is aware that developing a strategy document and a school vision would be a good way of moving beyond the pilot project phase.

The case study complements the European Schoolnet's publication 'School strategies for fostering students' digital competences. Guidelines for school leaders'.

Find the publication and other case studies at [fcl.eun.org/icwg](http://fcl.eun.org/icwg)



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