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During the first year of the Future Classroom Lab Regional Network (FCL Regio) project, teachers from Italy, Spain and Sweden, have worked collaboratively to integrate meaningfully the use of mobile technologies in their classroom.

Through the development of pedagogical scenarios, they have demonstrated how to integrate educational digital resources and technologies in their classes to improve learners’ engagement, allow students of different ages to share information and learn from each other, and finally involve the whole classroom in the creation of digital contents. The use of mobile learning and cloud services complemented effectively the enquiry based teaching strategies implemented in the classroom.

From a policy perspective, the FCL Regio project drafted seven recommendations for policy makers who are attempting to develop and implement ICT strategies for schools (the recommendations can be consulted online here). Based on this policy document, the project has developed practical suggestions that can serve as guidelines for school leaders.
1: Digital Learning Resources, ‘Beyond the Textbook’

School leaders should be supporting co-creation of innovative digital educational resources for schools by teachers, students and local policy makers working closely with software developers, publishers (both commercial and non-profit).

In order to successfully move “beyond the textbook”, it is particularly important that funding mechanisms and training (on standards, open licenses, new technological solutions) are not focused solely on adaptation of existing open educational resources (e.g. the creation of simple e-books). Actions should be taken to support the co-creation of original content for mobile technologies that both engages students and inspires teachers.

ENCOURAGE TEACHERS TO PARTICIPATE TO CO-CREATION SESSIONS.

For example, the Catalonia Department of Education has launched Co-creation projects whereby different teachers come together in order to identify common needs and then propose possible solutions to those needs in the shape of proposals for the classroom or the school. This initiative called Edu_Hack was carried out in collaboration with the GSMA/Mobile World Capital.

EMPOWER STUDENTS TO CREATE THEMSELVES DIGITAL RESOURCES FOR LEARNING.

Students and teachers can become active creators and producers of technology even during the classes as shown in the following pedagogical scenario where two schools from Partille and Jonsered in Sweden engaged their students in programming, giving instructions, creating digital learning resources.

https://www.youtube.com/watch?v=xp8rz-ZTFkQ
School leaders should ensure that excellence in education is based on equity and that all students are offered 21st century teaching and learning methodologies that are supported by innovative use of ICT and digitally competent teachers.

According to the 21\textsuperscript{th} century skills framework, digital literacy is an important skill for students to develop and the ability to encode and understand code is becoming more and more a fundamental skill to master to participate actively to our digital society and economy. During the elaboration of pedagogical scenarios and videos, school leaders highlighted the need to be supportive of IT development in the school.

“The first support [from the school leader] is to not be an obstacle. The second support is to make it clear to teachers and to children that the school is behind them, that the school believes in this. Because no matter how good is the project, it cannot move forward if the schools itself does not believe in it.”

Prof. Luigi B. Dappiano, Principal, Primary School of Mori, Italy, https://www.youtube.com/watch?v=7QJAd56bPow
3: a school vision for ICT in the classroom

School leaders should communicate a clear vision for how ICT can add value to teaching and learning and involve all staff in developing an ICT strategy that moves towards a whole school approach in making innovative pedagogical use of ICT.

The pedagogical scenarios and videos produced during the FCL Regio project show that teachers can effectively lead the development of ICT projects, exchange, and collaborate on innovative pedagogical use of ICT as empowerment tools for further collaboration at the school level.

Most importantly, they show that the whole school is somehow involved in the activities and that the school leadership is supportive and encourages the experimentation and the introduction of innovative practices.

“For me as a principal it is very important to be supportive of IT development in the school because it is in a way part of my role to be able to provide the right conditions both encouragement of IT use and room for skills development for the staff to know more”

Maria Nord, Principal, Primary School of Partille, Sweden, 
https://youtu.be/xp8rz-ZTFkQ
4: procurement and data management

School leaders can benefit from utilising central procurement mechanisms for ICT technology, tools and services where these exist.

Particular attention may need to be given to how different procurement approaches potentially impact on use of student personal data and the need for 1:1 access to mobile devices in and out of school.

The example of innovative pedagogical use of ICT strategies in two classrooms in Sweden highlights the importance of new models for working with resources “beyond the textbook” with the use of open online programs such as SCRATCH, or proprietary solution and hardware specifically designed for educational purposes. (https://youtu.be/xp8rz-ZTFkQ)
School leaders should be open to exploring new models for working with industry partners that can support innovative approaches to the implementation of ICT in schools including moving “beyond the textbook”.

New models of public-private partnerships have supported the design and implementation of innovative policies for a number of years and have helped provide funding for long-term initiatives in education. A clear example of this process is the mSchools programme, a multi-faceted initiative of Mobile World Capital Barcelona in collaboration with the Generalitat of Catalonia, Barcelona City Hall and the GSMA (representing the interests of mobile operators worldwide): [http://mschools.mobileworldcapital.com/](http://mschools.mobileworldcapital.com/).

Launched in 2012, mSchools has supported teachers and students with effectively integrating mobile technologies into the classroom, providing access to up-to-date materials, improving collaboration and strengthening learner engagement, and opening up new ways of teaching and learning that improve achievement and employability.
School leaders should resist having a policy that bans mobile phone use in schools and, alternatively, should work with staff, parents and learners to put in place clear student use policies and guidelines.

Banning mobile phones in schools represents not only a lost opportunity to have quick and easy access to information but also to use specific educational applications that help bring learning activities closer to the students. There are certainly important issues related to eSafety and the fact that the use of mobile devices in classrooms can sometimes be disruptive; however, the solution is not to prohibit their use but rather to teach students how to use mobile phones and other devices in a responsible and safe way.

Establishing guidelines and performance standards that clearly show the spaces, activities and situations where the use of mobile phones is not only allowed but also encouraged is much more effective than imposing a blanket ban. In addition, schools and teachers must be provided with pedagogical support, training and recommendations that allow them to maximize the potential of mobile devices.

There is a growing number of studies which highlight the potential of mobile devices and how they can be leveraged to support educational objectives. According to UNESCO’s report Policy guidelines for mobile learning (2013), mobile learning “involves the use of mobile technology, either alone or in combination with other information and communication technology (ICT), to enable learning anytime and anywhere. UNESCO have published two other reports that focus on European experiences. These are Turning on Mobile Learning. Illustrative Initiatives and Policy Implications (Hylén, 2012) and Mobile Learning for Teachers. Exploring the Potential of Mobile Technologies to Support Teachers and Improve Practices (Dykes and Renfrew, 2012). These reports
show experiences that can be inspirational for the design of initiatives based on the use of mobile devices both for educational institutions and for policy implications.

A recent report published by the London School of Economics and Political Science (Vincent, 2015), *Mobile Opportunities. Exploring positive mobile media opportunities for European children*, presents findings about how children and young people aged 9-16 use smartphones and tablets, and examines the potentially positive online experiences that mobile opportunities offer.
7: working with policy makers on teacher training

School leaders should work closely with policy makers and advisers to ensure that local institutions responsible for providing initial teacher education and continuous professional development are aware of the competences that teachers need in order to work effectively in ICT-enabled classrooms.

School leaders should propose a minimum level of digital competences for all teachers as part of their school ICT strategy linked to a programme of professional development activities that motivate all teachers and helps them to better understand the benefits of using ICT to support innovative pedagogical approaches.

During the elaboration of pedagogical videos, it has appeared that the use of mobile devices and cloud services in the classroom, despite the great benefits for students, remains optional for teachers and is not fully integrated in national curriculum from countries partner of the project. However there are many examples available from teachers who have succeeded in integrating ICT to support innovative pedagogical approaches. In order to implement further these approaches, corresponding teaching training must be brought to initial newly qualified teachers taking advantage of a variety of resources and best practices are already available.

During this first year of the projects, partners and school stakeholders particularly highlighted the need of collaboration between school leaders and policy makers in order to work effectively in ICT-enabled classrooms (more information under the school principal interview of the Jonsered School under [https://youtu.be/xp8rz-ZTFkQ](https://youtu.be/xp8rz-ZTFkQ)) but also at different levels.
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