UNESCO-Fazheng project on Best practices in mobile learning

Top-down cases

1. *Future Classroom Lab, European Schoolnet*

Created by European Schoolnet, the Future Classroom Lab (FCL) is an inspirational learning environment in Brussels, challenging visitors to rethink the role of pedagogy, technology and design in their classrooms. Through six learning zones, visitors can explore the essential elements in delivering 21st century learning: students' and teachers' skills and roles, learning styles, learning environment design, current and emerging technology, and societal trends affecting education. Since the opening of the Future Classroom Lab in January 2012, European Schoolnet and its 31 supporting Ministries of Education have worked closely with a growing number of ICT providers to ensure an independently-funded and sustainable platform.

2. *Future School, Singapore*

FutureSchools in Singapore serve as peaks of excellence in an ability-driven education paradigm, and they encourage innovation and enterprise in schools. These schools do not only enhance the diversity of educational offerings to cater to learners' needs, but they provide possible models for the seamless and pervasive integration of ICT that includes interactive digital media. By harnessing ICT in the education sector through innovative pedagogies and flexible learning environments, schools will be able to achieve higher levels of engagement with their students who already have already adapted a lifestyle using ICTs.

3. *Future School Lab, China*

The Initiative for Innovation of the Future School in China was officially launched by the China Future School Lab, NIES since 2013 under the leadership of researcher Wang Su. This initiative takes advantage of information technology to promote structural changes in school education and accelerate the integration and innovation of space, curriculum and technology to provide theoretical guidance and practical instruction for the overall innovation of schools, empowerment of teachers and cultivation of students' key competences. The program has provided evidence-based educational decision-making services for national and local governments, promoted students' equal access to quality education and digital learning resources.

4. *Building the school of the future, Finland*

In Finland approximately every decade a new National Core Curriculum for basic education is designed under the direction of the Finnish National Agency for Education. In the new core curriculum Information and Communication Technology is an integrated tool for learning, and it is taught as part of all the subjects. In the curriculum design process the local authorities have been planning how to implement ICT effectively at all levels of the basic education system.

5. *SMART Education Schools, South Korea*

The ultimate goal and vision of Smart Education is to 'foster creative global talents' through a comprehensive "classroom revolution" including changes in educational contents, methods, evaluation, and environment with the changing educational paradigm. Smart Education aims to be Self-directed, Motivated, Adaptive, Resource Enriched, and Technology Embedded, as a driving force for innovating educational systems.

The Smart Education initiative involves a change in students' role from recipient to producer and the teacher's role from knowledge transmitter to facilitator. The practice includes online achievement diagnosis and prescription-based self-directed learning and the implementation of customized learning associated with personal preferences and future occupation.

6. *One Laptop per Child and Plan Ceibal, Uruguay*

Following the postulates of the OLPC international initiative, Uruguay was the first country in the world to commit to and implement a plan to distribute personal computers to all students and teachers in public education, with the strategic purpose of improving educational quality within a framework of equity. For more than a decade, Plan Ceibal, which began in 2007, and was named in honor of the national flower tree, has managed to install and maintain a computer infrastructure that reaches all elementary and middle schools, and ensures access to laptops, for both students and teachers, as well as Internet connectivity for all classrooms. However, Ceibal faces the important challenge of responding to the changing needs of training and digital inclusion of the population, which in the present are not necessarily addressed by the sole availability of digital devices, but rather through facilitating a pedagogical and critical use of technologies.

The case study describes and summarizes some of the main characteristics, innovations, lessons learned, limitations and achievements of the implementation of Plan Ceibal in Uruguay in the last ten years.

7. *Future Ready Schools, USA*

Future Ready Schools is a bold effort to maximize digital learning opportunities and help school districts move quickly toward preparing students for success in college, a career, and citizenship. The initiative provides districts with resources and support to ensure that local technology and digital learning plans align with instructional best practices, are implemented by highly trained teachers, and lead to personalized learning experiences for all students, particularly those from traditionally underserved communities.

8. *Smart Classroom, Rwanda*

The SMART Rwanda Master Plan includes a vision of turning the economy into a knowledge based economy through the use of information and communication technologies (ICT). As part of the national plan, the Ministry of Education is implementing the Smart Classroom initiative, which is the country's personalized approach adapted to fit the situation in Rwandan schools. Although there are challenges faced during the different phases of this plan, more than half of all primary and secondary schools across the country are now equipped with devices and teachers utilizing ICTs in teaching and learning processes with the aim of covering all schools by 2020. The study shows the involvement of all the different stakeholders' responsibilities and their contributions towards improving the relevance, quality and access to education by harnessing the power of ICT in education.

9. *e-Schools: Establishing a System for Developing Digitally Mature Schools, CARNET, Croatia*

CARNET is coordinating the project "e-Schools: Establishing a system for developing digitally mature schools" aimed at digitalizing teaching and business processes in 10% of Croatian schools. Majority for the project (85%) is funded by Structural Funds of the European Union.

Modern ICT infrastructure, equipment, services, content and support increased efficiency and transparency in school management, strengthened teachers' digital competencies and facilitated implementation of modern teaching methods, resulting in developing digitally competent students, who are competitive on the labor market, prepared for further education and lifelong learning. In the period from 2019 to 2022, CARNET plans to conduct a major project, which will include all Croatian public schools.

10. _mSchools, Catalonia, Spain_

mSchools is a multi-faceted education programme that empowers students and teachers to integrate mobile technologies into the classroom, opening up new ways of teaching and learning that improves achievement and employability. The mSchools Programme develops curricular materials, tools and methodologies designed to empower teachers to change their pedagogy, with a special focus on digital competencies, an advocacy for STEM career paths and gender equality. mSchools is backed by a strong private-public partnership that has allowed the tech industry to provide mentorship and guidance. Over 130,000 children from ages 8 to 18 have been impacted by the mSchools programme.

11. _GINIE (Programme de généralisation des technologies de l´information et de la communication pour l´enseignement), Morocco_

Launched in 2005, GENIE is a large-scale, long-term national policy initiative developed and implemented by the Ministry of National Education and Vocational Training, Higher Education and Scientific Research of Morocco. It aims to incorporate ICT to improve the quality and access to education in primary and secondary schools.

The programme has provided infrastructure, digital devices and internet connectivity to more than 10,000 schools, and promoted pedagogical innovations through the in-service training for more than 300,000 teachers and school administrators across the country. It fosters the creative use of ICT to ensure an inclusive access to quality education in every school in the country and covers the four main languages used in education (Amazigh, Arabic, English and French).

It incorporates key pillars for an effective national ICT in education policy such as infrastructure, teacher training, development of digital resources and transformation of teaching and learning practices.