

Open Education 2030

Call for Vision Papers

School Education

Open Schools 2030

Pierre-Antoine Ullmo

P.A.U. Education

Major changes will take place by 2030 if school education is based on the active participation of the students themselves; the enthusiasm and engagement of digital natives constitute the new milestone for our educative systems.

All prospective studies that lead to the year 2030 reveal the importance of knowledge and individual empowerment to sustain economic growth and social cohesion. “Rethinking education¹” has become a central policy objective for the 20 years ahead.

Designing this change can certainly be seen as a prospective exercise. Children that will attend school in 2030 are not yet born; Half of their teachers are not yet hired²; Many of the professional careers they will choose are still unknown, and much of what they will need to learn for their future jobs isn’t taught at schools today; Most of the 20-year-old innovators and entrepreneurs that will widely influence the way these students learn and live are currently about to enter pre-school³. Many questions line the horizon of 2030 regarding core issues like upcoming technological innovations and the rhythm of economic growth. As such, experts’ creativity and inventiveness are continuously challenged and all ideas are welcomed.

Nevertheless, designing change is not (only) a prospective exercise. Even though most of our current policymakers, researchers and experts will have retired by 2030, their vision and thoughts will engage structural changes that determine how school education will look 20 years from now.

Educative systems are accustomed to change. Some would say that they are in a state of constant change. Over the past 30 years, all EU countries have been continuously engaged in a deep reflection regarding the future of their educative systems. The rhythm of these organizational and curricular reforms during this period more than doubles that experienced since the turn of the 20th century⁴. Are we simply facing yet another cycle of change that will yield to a set of new reforms? Will it constitute a “controlled” change to adapt schools to new technological, social and economic conditions? Or are we on the edge of a true revolution?

¹ Rethinking education: Investing in skills for better socio economic outcomes, communication, European Commission, 2012

² Key data on education in Europe, Eurydice - Eurostat, 2012

³ Mark Zuckerberg created Facebook when he was 18 years old.

⁴ 100 years of Educational Reforms in Europe, Christelle Garrouste, JRC, 2010.



The Times They Are a-Changin’

Over 20 years ago, Seymour Papert⁵ argued that: “children will (no longer) sit quietly in school and listen to a teacher give them predigested knowledge. They will revolt.” The revolt didn’t take place at the time and our schools didn’t change (much).

There are several good reasons to think that times are now riper for a “revolt” of great magnitude. In countries like Spain or Portugal, more than 30% of early school leavers and more than 50% of unemployed youth aged over 18 throw the very meaning of school education into question. In the USA, we have just witnessed the first cases of higher education students filing a lawsuit against their law school for creating false expectations with regards to their future employability⁶. The failure of our societies to provide work to youth and to fully integrate them into society may mark the end of school education as we know it until now: a continued process that should lead children and youth to progressively gear up for their futures as successful professionals and responsible citizens. Is there time before 2030 to adapt our school education systems in order to prevent resounding failure? Will we be able to control the change?

Whether or not we believe we have sufficient time in which to act, 2030 is but a generation away and many wonder why this deep transformation didn’t take place sooner. The last 20 years have shown us how long it takes educative systems to adapt to the requirements of a changing environment in all its social, cultural and economic dimensions. How can we be sure that we will succeed in changing systems that have shown such strong resistance to change?

An Open Education Model for Schools?

Naturally, our first assumption will be that the 2030 school education is (pre)designed. Experts agree that major changes are required in the way that learning is delivered, students are motivated, teachers are trained, and schools are managed. Education needs to open up to new contents, teaching practices and tools. A more individualized learning path and flexible core curriculum are among the key ingredients to this transformative process. Technology is seen as one of the main drivers to achieving major transformation both in and beyond the classroom. These ingredients are central to the “open education” initiative upon which European policymakers have based great hopes for a rapid metamorphosis of school education.

An Open Education school system emerges from the many studies and innovations that abound these days. If we believe in the “market trends”, all schools, students, teachers will be fully equipped with computers, laptops, tablets, smartphones, individual supplementary devices and Internet connection. Learners and teachers will access cloud-based applications through a web browser or mobile app. Learning platforms will provide students, teachers and parents with an educational space on the web and online access to classes, class content, tests, homework, grades, assessments, and other external resources. Digital textbooks replace their traditional counterparts. Pupils will access free digitalized learning materials and teachers will prepare their lesson plans by using, adapting and redistributing materials available in the public domain or released under an open license. Contents will be available on all electronic devices including second generation smartphones and tablets. Specialized applications and e-

⁵ The Future of school, Discussion between Seymour Papert and Paulo Freire, Seymour Papert, 2000

⁶ “Lawyer glut prompts suits against law schools”, Maura Dolan, Los Angeles Times, April 10, 2013.

learning solutions will meet students' needs for each curriculum subject. Educational games will be widely used to teach, expand and reinforce key subjects and concepts. School and classroom design will evolve towards more inspirational spaces for teaching and learning. Teaching and learning communities of practice will flourish, nourished by continuous sharing of information and experiences, and will be central to the development of Open Education resources. Children with measured disabilities will get focused instruction in one-on-one or small-group settings. Those with more severe disabilities will benefit from "assistive devices" in the regular classroom environment. Learning analytics tools will assess students' individual learning within and beyond the classroom with the objective of adapting pace and contents to their needs and capacities. Personal Learning Environments (PLE) will help learners take control of, and manage their own learning.

If we follow these guidelines, the 2030 school system will be a hybrid model in various ways:

- A hybrid model of learning, which combines a "limited core curriculum for teaching the rigorous thinking and argumentation specific to a field⁷" with an inquiry-based "hands-on" approach supported by continuous exchange of experiences taking place in niche communities of practice;
- A hybrid model of learning places combining innovative classrooms and out of school learning experiences at home, in the surrounding community or at the workplace;
- A hybrid learning timetable where children will go to class "when they want to and when they need to⁸", and will dedicate up to 90% of their remaining learning time to less formal or interactive learning experiences;
- A hybrid technological model, which combines computers, tablets and second-generation smartphones that can be accessed in and out of school.

Resistance to Change

This static picture reveals none of the potential resistance and constraints to change. Technology has been around for the last 20 years in one form or another. At the dawn of the Internet era, Papert wrote that technology was "going to displace school and the way we have understood school." He saw the "fundamental nature of school coming to an end". However, 20 years later schools are still around, and remain largely unchanged. The same buildings host the same classrooms with a standard spatial organization and the same "curriculum dictatorship", even though core curriculum has changed many times in every country. What is taught remains more important than what is learned.

Schools have not evolved, yet students have changed drastically. School children belong to the generations who have been raised in a context where digital technologies form an inextricable part of daily life. The so-called *New Millennium Learners* "NML"⁹ or *digital natives*¹⁰ spend the same amount of time on electronic media per week as an adult at the workplace.¹¹ When children go to school, they already know lots of things that schools will never teach them. We have (re)discovered that children have an incredible ability to learn by

⁷ New Learning Environments for the 21st Century, John Seely Brown, 2005

⁸ Seymour Papert, idem

⁹ The New Millennium Learners: Challenging our Views on ICT and Learning, Francesc Pedró, OECD-CERI, May 2006.

¹⁰ Mark Prensky, creator of the expression "digital native".

¹¹ From consumers kids to sustainable childhood, Editor: Daniel Yeow, Worldwatch Institute Europe, 2012 (Danish survey: "Totalling 41 hours and 30 minutes a week in front of a screen; children's media use is essentially the same as an adult's working week".

exploring, and in specific contexts, to go as far as teaching themselves. They can access knowledge when they want to and when they need to. School is, in fact, the only place where they can't freely exercise these abilities. The vast majority of teachers are still unable to use the technology to which they have access in a creative way for educative purposes. Why should a child study Rome when the videogame "Cradle of Rome" gives them the opportunity to build Rome every day? In the words of Larry Cuban¹², teachers "still use the laptops to sustain existing practices in the classroom."

It remains unclear how schools should and could transform themselves to better respond to the needs of these "NML" and the society in which they live. On the organizational side, several questions are raised. Are we aiming at fewer pupils per classroom? Even in a no change context, classrooms will certainly experience a decrease in the number of students, due to demographic trends¹³. Will we be able to invest heavily in teachers, in order to recruit the best talents into teaching (and among the best, the very best in the most challenging schools)? Over the past four years, we have seen how uncertainties regarding economic growth rapidly translate into budgetary cuts in education.

On the pedagogical side, many question marks also remain. How will we address the need for greater creativity in the classroom? Do we advocate – as Paulo Freire did in the 80s – pedagogy of the question (rather than of the answer)? Should we prioritize activity-based learning rather than traditional lecturing as in the flipped classroom model? Will we substitute - in words of John Seely Brown¹⁴ - a school of "learning about" with a school of "learning to be"? The answers will depend largely on our capacity to engage teachers in inventing new teaching practices with which to achieve these new pedagogical objectives, and encouraging them to fully utilize the new teaching technologies at their disposal.

Changing our Expectations

Is it therefore reasonable to think that such a change could take place in the next 15 years? The answer is "yes" - if our expectations regarding what school education system undergo equally radical changes. We can no longer argue that "learning should be more about acquisition of knowledge, skills and competences rather than completing a specific stage in a given time in school¹⁵" - and at the same time ask more of the school. It is easy enough to state that "at a good school, children gain the basic tools for life and work¹⁶" but it is not realistic to argue that with the same resources, a good school must also enable these children "to learn the joy of life, the exhilaration of music, the excitement of sport, the beauty of art, the magic of science, the value of life, the sense of citizenship and responsibility¹⁷."

We cannot continuously extend the list of responsibilities incumbent upon schools and design a road map for change based on more flexible and responsive school system. It is not and cannot be the task of the school to solve all of society's problems.

¹² Unused and Oversold, Larry Cuban, Harvard University Press, 2000.

¹³ A fall of around 11% among those aged 5-9 is projected in the EU 27 by 2020 – Key data on education in Europe, Eurydice – Eurostat, 2012.

¹⁴ New Learning Environments for the 21st Century, John Seely Brown, 2005

¹⁵ Rethinking education, Communication, European Commission, 2012

¹⁶ Speech by Tony Blair, University of Southampton, Wednesday 23 May 2001

¹⁷ idem

Alone, the 2030 school will not be able to empower each individual child, ensure the acquisition of core numeracy, language and literacy skills for each child, develop vocational and employability skills, strengthen entrepreneurship competences, take a leading role in preventing violence, child obesity and road accidents, and promote environmental awareness, multicultural dialogue and peace education from an early age.

It is not enough to design a school model with no classroom and transparent walls, as a precursor to changing the whole system. Even if some schools in the Northern part of Europe¹⁸ look like “dreamed places”, many children in the south still sit in pre-fabricated classrooms. Even if broadband is becoming the norm, technological optimization¹⁹ is far from being standard. Nevertheless, change should take place in spite of social inequalities, technological instability and economical uncertainties. This is where a broader vision of open education can make a “real” difference.

Open Education: A New Meaning

The 2030 school will have to relinquish its all-encompassing ambition and get ready to embrace new partnerships. This could be the very meaning of Open Education for our schools: opening up to new alliances and to sharing their educative responsibilities with the surrounding community.

In 2030, a large proportion of learning will take place outside the classroom. Schools will be forming strong bonds with their local communities. The role of the city as a global educative setting will be strengthened. Communities of practice will flourish and be sustained through the social media. The very meaning of education should evolve towards a comprehensive participatory framework. Children should be “supported to develop their capacity to critically explore and understand the world they live in from their own perspective and life experiences²⁰”. Under an Open Education paradigm, children will be directly involved in the governance of the settings of their everyday lives. This will occur when our need for change is nourished by innovative experiences that have developed over the years in non-technological contexts. Schools like “Escuela Nueva” in Colombia or innovative networks like Reggio Emilia demonstrate that change can take place on the margins of the system, and with the complicity and involvement of the community.

Major changes will take place by 2030 if school education is based on the active participation of the students themselves. The enthusiasm and engagement of digital natives constitute the new milestone for our educative systems. Within this context, Open Education will give children the right and responsibility to shape their own futures and the futures of their communities.

¹⁸ Stockholm Vittra school, for instance.

¹⁹ Bridging the Bandwidth Gap: Open Educational Resources and the Digital Divide, Björn Haßler, IEEE Computer Society : “By allowing websites and OER content to grow in size not only do we provide a poor user experience for all users, but we make our sites virtually unusable with a slow Internet connection.”

²⁰ Children’s Participation, Roger Hart, Earthscan, 1997