

Open Education 2030

Call for Vision Papers

School Education

Children contribute to their school and learn by making

Gisèle Legionnet-Klees

Teachers create the space for the children to learn, drawing from and contributing to the open education resources. General digital literacy and demanding education standards allow children to do significant contributions to the open resources.

Today, our schools essentially teach children to become citizens in a world where digital technology fuels globalization of ideas and economies.

In 2030, schools will be a framework where children become amplified individuals in a highly connected world where the physical and the digital are no longer discernible.

As I am a designer of digital services, I ask myself: what would it be like to design an open education environment in 2030? Who will be designing it? With what tools? For what purpose? Who would be using it?

To start, I look at a bigger picture of society and economy. Then I define objectives, and finally think about technology and features.

Bigger picture: What does the adult life of children who go to school in 2030 look like?

This means looking at the year **2050**, when kids leaving school in 2030 will be adults.

These individuals will have experienced a life where planning beyond 3 to 5 years is impossible, where large-scale changes have taken place in the course of their lifetime. They need to be able to survive (food, air), make sense of things (culture) and feed their family (economy).

Nature will be highly technified and the human body will be enhanced by self-improvement technologies and practices.

Living spaces will be mega-cities within which community-based activities will cover needs such as food production, social interaction and education. People will spend a larger share of their resources on food than in 2013. The organisations which will be able to create compelling stories for their co-owners will make the biggest profit.

Information will be everywhere. People will organise in communities to build their own houses and equipment, make their own clothes and create their memories as blended physical - digital artefacts. Mastering crafts like wood working, painting on paper... will be rare. Outdoor activities will be exceptional in everyday life, and will take place outside of the city. The countryside will be largely empty of human life.

OPEN EDUCATION 2030. JRC-IPTS CALL FOR VISION PAPERS. PART II: SCHOOL EDUCATION

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For large parts of the population, money will be a lot less abundant than in 2013. Hence self-sustaining communities will have formed to create liveable spaces for young and old. These communities will not be limited by geography but more by shared interest and values.

Work will take place anywhere, everywhere, and will happen within the community as well as in larger entities.

These communities will generate their own learning environments. Children and adults will learn side by side, in a system of mentoring and peer to peer assessments.

In terms of safety and security, there will be global threats. Every individual will have her own digital self-stored and identified. The universal connection scheme for objects which will have evolved from the internet of things will enable large scale monitoring of people and their activities. But the collected data will also be made available to all.

Significant improvements will have been made in the area of the ergonomic design of digital objects in order to enable the wide-scale adoption of technology and to avoid large-scale risk, from mind-controlled displays to robots.

What are the skills the children in 2030 will need to learn?

From our above scenario, some skills and knowledge can be described:

- building meaningful relationships
- being part of a community and contributing to the community
- being able to adapt to changing environments
- being able to sustain oneself
- being able to build, use and share knowledge
- navigating the physical and the digital spaces
- being able to understand, craft and contribute to the digital technospace.

What will it be like to go to school in 2030?

It has been suggested by Sugatra Mitra that in order to learn, children merely need three things: connectivity, collaboration, and encouragement. The process he describes in his SOLE Challenge revolves around asking big questions, and then let the children self-organise in small groups, with connected computers, and give them positive feedback and encouragement "like a grannie would do."

This could be a powerful model to make use of free available resources on the web and by 2030 this experiment will certainly have left traces in the sand of the school system.

Lets think of a school ecosystem in which this experiment has left its traces and where open learning is the main resource.

The relevant components of this ecosystem are:

- children and the age group they belong to
- the knowledge made accessible to them
- the available teachers
- the skills the children can learn
- the assessment of the acquired skills and knowledge
- the method through which the skills and knowledge are acquired

- the knowledge the children make available to others as a result of what they learned and created
- the community in which the school operates

We see the need for a **framework**, for instance in the form of tagging information attached to learning resources, which teachers would be able to use to configure the learning experience, prepare the assessment and enable the outcome of the work both by teachers and children to be made accessible to the community of learners and teachers.

We suggest that in order to truly support children to develop their personality in a world of amplifying technologies, where English is a natural language across Europe, where digital spaces are almost melted with the physical space, it is of high importance to give the children the possibility to make their own things and to grow their own food.

We propose that children are given assignments and tools to build interactive objects using both digital technology and traditional crafts using paper, wood, fabric, metal...

Already today there are open source projects enabling the construction of interactive objects, from LittleBits to Arduino. As the digital space will have become integrated with the physical, children will be able to use open source code, patterns, instructions, and also come up with their own inventions and share them with their community of peers.

Open source will be the true ... source from which the community will be able to store and expand its cultural heritage, including for and from its children.

Today, companies are able to create closed ecosystems on the basis of the work shared in open source. We would suggest that with the widest possible acquisition of making and coding skills, communities will be able to take ownership of the things they need.

Expanding this vision of sources of information widely available, the role of the teacher will be this of a mentor, and parents and other adults will contribute as experts in their field towards the children in their community. An important facet of the mentoring role will be to help students stretch their perception of the world to understand the complexity of the systems, and to learn to think as “solutionaries” as suggested by Zoe Weil.

Due to financial pressure, schools will work on a freemium model where only 80% of classes will be free of charge. 20% of classes will either cost money or require contribution of the children or their parents, e.g. as mentoring, teaching, producing materials or other activities relevant to the school.

Learning needs and learning successes will be predicted and logged in the framework.

Based on standard curriculum, individual characteristics like IQ, country, age, origin, previous learning log, priorities of development, individual priorities. learning needs will be the basis for the activity schedule. For each child at school, and for each adult in the community, the learning objectives will be stated. Within the school system, parents and children make certain choices. The system then gives recommendations for activities and topics.

In conclusion, we hope that schools in 2030 are a protected but connected space where children learn to collaborate, share and make things, in a community focused manner.

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