Envisioning the future of education technology

Education lies at a peculiar crossroad in society. On one hand it has the responsibility of anticipating real-life skills by preparing us for an increasingly complex world – but education methodologies can only be formalized after practices have been defined. This dichotomy is particularly aggravated when it comes to technology, where fast-paced innovation and perpetual change is the only constant.

This visualization attempts to organize a series of emerging technologies that are likely to influence education in the upcoming decades. Despite its inherently speculative nature, the driving trends behind the technologies can already be observed, meaning it’s a matter of time before these scenarios start panning out in learning environments around the world.

Classroom

The prevailing paradigm of a single teacher addressing dozens of students unidirectionally in a physical setting.

2012

- Tablets
- Data projectors
- Educational programming tools
- Interactive whiteboards
- Educational games
- Student-developed apps
- Classroom performance dashboards
- Disintermediation

Rather than considering IT a standalone tool or skill, digitization tends to disperse throughout every facet of the classroom.

2020

- 3D printers
- Object-embedded intelligence
- Portable academic histories
- Disembodied environments, where learning, discussion and assessment happen regardless of physicality or geography.

As classrooms digitize, students are free to collaborate with peers globally.

2030

- Attention tracking
- Reactive furniture
- Digitally intermediated field trips

Bridging the online–offline gap, these future technologies offer a potential future where disembodied environments negate the need for physicality.

2040

- Reactional screens
- Neur-informatics
- Immersive virtual reality

Educating in a world of limitless information, technology enables students to cope with a perpetually changing world.

Studio

Peer to Peer learning environments where groups continue to discuss, learn and solve problems with each other and the teacher serves as a facilitator.

2012

- GAMIFICATION
- Online school communities
- Video lessons
- Open courseware

Rated as an evaluation in grading mechanisms, gamification brings instant feedback to acquired knowledge through achievements and points systems.

2020

- Self-paced learning
- Task-assignment algorithms
- Teacher-assignment algorithms

Comparatively, in studios and virtually, we see ubiquitous, mobile use of technology.

2030

- Mobile learning platforms
- Teacher-designed learning mechanics

Undoing the traditional teacher-student model, these technologies offer a scenario where AI handles personalization while teachers focus on teaching.

2040

- Virtual/physical studios
- Flipped classrooms
- Digitalization of books
- Flipped classrooms

65% of today’s grade school kids will end up at jobs that haven’t been invented yet

United States Department of Labor: Futurework - Trends and Challenges for Work in the 21st Century