

The Only Way to Create the Skills of the Future is to Disrupt the Education of Today

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Abstract. Traditional education generally suffers from several issues, no matter the country, the level, or the education system. A first issue that may be highlighted is the fact that today learners are evolving in an “*education 1.0*” world to be prepared for the “*industry 4.0*” world. This paradigm gap decreases the motivation of learners that may perceive their schools as outdated, resulting in a disengagement in their own education. A second difficulty is the management of teachers, in particular for former ones and those who are teaching quickly evolving fields such as computer science, for example. Of course, not only the skills related to teachers’ teachings are important and may need a refreshment, but they also must get acquainted with new pedagogical practices. A third main concern is related to the competencies taught to current learners who should be educated for the world of tomorrow, and potentially for jobs that do not exist yet.

This last consideration is precisely the subject of this presentation. How to create the skills of the future through education? More precisely, two far-reaching questions have to be answered, as reported by “*The Future of Education and Skills 2030*” project: what knowledge, skills, attitudes and values do today’s students need to thrive and shape their world and how can the education systems develop these requirements effectively. Small adjustments of today’s education may have small impacts, but they are often very localised and not accessible to all learners. Although there is no magical and unique way to transform education to tackle the aforementioned questions, disrupting today’s education is a major concern of several actors in the world.

Disruptive technologies and innovations are the keys to invent the education of tomorrow that will prepare future learners to the world of “*after tomorrow*”. Recently, MOOCs development completely changed the deal, enabling a massification of learning at reduced costs, and making education more accessible. More generally, disruptive technologies are interrupting our usual practices and assumptions and opens up new possibilities by forcing new thinking and approaches to the teaching and learning works. But this is not enough! The next education disruption must produce solutions having several qualities. First, they must give the learners more control over their learning, accommodating to their learning style and interests and providing greater opportunities for personal work and reflection. Second, they must offer options to the learners, motivate them, connect what they are doing with the real world and letting them create the future. Finally, they must capitalise the learners’ willingness to experiment, fail and improve, and to keep working on problems until solutions are crafted.

This talk presents three concrete experiments that are currently lead by the speaker, that may be part of the next education disruption. The main goals behind the three experiments are the same, namely to propose individualised and personalised learning approaches to create the skills of the future. The first experiment is a new pedagogical approach that organises teaching activities and evaluates learners in a way to be better adapted to their learning style and pace. The second experiment is a new course format that makes it possible to better accommodate to what learners want to work on and prepare the future with them. Finally, the last experiment allows learners to be challenged by concrete problems and better connect them to the industry.