

Review: 25 Years of Ed Tech

Anna Sánchez-Caballé

anna.sanchez.caballe@ui1.es

Universidad Isabel I, Spain

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25 Years of Ed Tech, by Martin Weller, is organized into 25 chapters, throughout which the author goes over the evolution in education technology (ed tech) and its biggest milestones from 1994 to 2018. Each chapter covers a year and its related tool or concept from a descriptive-critical perspective through which the author emphasizes the social and human role of ed tech.

In the area of educational technology, it is often thought that progress comes quickly. Furthermore, experts in this area come from different fields of knowledge. In this context, the author suggests: (1) providing a basis for professionals who enter the area; (2) sharing and recording a history of implementation of technologies in advanced education; (3) presenting the application of various technologies throughout time to facilitate the future implementation; (4) highlighting the importance of addressing ed tech from a critical perspective; and (5) providing an alternative narrative regarding ed tech history.

Below, as the author does in the book, each chapter will be reviewed, addressing the concepts that the author delves into:

1994, Bulletin Board Systems (BBS). The year 1994 marks the beginning in the world of educational technology. BBS made it possible to share content through the net, promoting thus a new use of the internet and allowing to think of new possibilities related to education. The problem with this technology was that it was too technical, which made its application difficult.

1995, web. This year the web search engine was popularized. The web was still quite technical, but there were progressively more accessible interfaces. This universalization of the web sets the basis for most technologies that are presented throughout the book. In fact, one of the most important milestones in history is the abolition of the publication filter, which caused a sociotechnological change.

1996, Computer-Mediated Communication (CMC). CMC unites several kinds of communication online and represents the beginning of the engagement of education with online tools. Such technology allowed the generation of considerations around how, when, why and with whom online communication should be done in educational environments.

1997, constructivism. Constructivism is born with the search of a way to teach classes online in which video, given the technical limitations, is not an option. Thus, it is born with the intention of making the most out of the web's potentialities for learning searching for a useful option, that is to say, not only recreating the characteristics of the face-to-face model. The main idea of constructivism is that it is the learner who is in charge of building their own knowledge, basing it on their experience and concept relation.

1998, wikis. Wikis are the technology which best represent the “open web” philosophy. A wiki is a web page which can be edited by anyone collaboratively. This technology caused a change towards web democratization. In its beginning, wikis did not have a technical language, but with time interfaces were facilitated. Apparently this could be a powerful element in the educational field; however, from the author’s perspective, its full potential has yet to be used.

1999, e-learning. This kind of learning was already being done before. However, since 1999, with the popularization of the web, the integration of the prefix “e” gained prominence. Schools of all levels started showing interest for this option. In this moment it was considered that it would suppose a lesser cost than that of face-to-face, which was subsequently denied. E-learning shaped the following decade regarding technology, standards, and educational approaches.

2000, learning objects. This concept is understood from the perspective of the integration of programming in objects. In the educational context, it was centered around teachers avoiding repetition. It was deemed unnecessary to have a teacher in each place repeating the same concept. Even so, its integration was not successful, since there were many debates around its definition, the reuse and the teachers’ ability to handle said technology. This idea and debate reappear throughout the years.

2001, e-learning standards. At the beginning of the millennium, the interest in e-learning rose, which implied putting efforts toward the creation of easy to use platforms, the definition of evidences for monitoring, etc. In any case, and with the purpose of facilitating its implementation, several standards for electronic learning were elaborated. According to the author, good standards are those which act as a guide so that things work and, thus, are not the center of the learning’s process, but secondary.

2002, The Learning Management System (LMS). LMS are robust systems which offered universities a corporate solution to e-learning. Before LMS, e-learning was done via a wide range of tools (bulletin boards, content management systems...) which varied depending on the institution. LMS provided centers with a collection of the most popular tools, allowing thus a faster establishment of e-learning.

2003, blogs. Blogging was a direct result of web 2.0. When society realized that everyone could publish online, people started publishing content on their own. Blogs started, for many people, by being a kind of online diary, and social networking sites allowed to those interested to subscribe and receive updates. From the educational point of view, blogs are key tools in work and the creation of a digital identity.

2004, Open Educational Resources (OER). OER can be considered teaching-learning materials which can be found in any medium and are of public domain. Therefore, they have been freed of rights and allow their access, use, adaptation, and redistribution without costs. A key initiative in this direction was MIT’s creation of the OpenCourseWare in 2001.

2005, video. 2005 was the year in which YouTube was found and several video-sharing services grew. Everyone could create and share multimedia content easily. Thus, the process of the democratization of content transmissions through HTML started. In the educational field, the use of video was usually limited to its transmission; however, it entailed a new conception of possibilities for learning objects. Videos are very useful for the creation of short expositions of key contents; however, many schools still don’t assess their students’ ability in reference to the use and creation of videos. In fact, in the year 2018, text was still the dominant form of communication in education. According to the author, it is important to search other way to evaluate students and videos could be one of those.

2006, web 2.0. Web 2.0 marked an inflection point in relation to the generation of content by users. The main difference between the called web 1.0 and web 2.0 consists in that the former is static and, therefore, its users have a passive role. In opposition, the latter is characterized by the creation and spreading of content by users and the interaction between them as well. With 2.0 something similar to the "e" prefix happened: it started being annexed to different words (university 2.0, library 2.0...)

2007, second life and virtual worlds. Virtual worlds such as Second Life existed long before 2007, but that year their popularity rose. In that moment, schools and universities started creating islands to teach formative courses in such environments, but virtual campuses were not as successful among students as it was expected. Although the first experiences did not have an excessive repercussion, with games such as Minecraft and Pokémon Go, stronger from a technological point of view, perhaps the time has come to reconsider and reintegrate said technology in educational contexts, according to the author.

2008, e-portfolios. E-portfolios in education were created with the intention of being an archive in which students could store and exhibit their learnings (both formal and informal). This idea promotes what is understood as learning throughout life. E-portfolio was a technological product which rose much interest in academia. However, it could not manage to be established as the standard option in evaluation. Some of the reasons why it was not established as such were the difficulties present in such softwares. Oftentimes students find it easier to use a blog or their own web domain to show their work and create their digital identity.

2009, Twitter and social media. Twitter was created in 2006, and in 2009 it already had several users. However, throughout the years it has evolved into a complex space in which diverse stances are debated and presented, and where humans who have their own opinions coexist with trolls and bots. In many social networking sides, such as Twitter and Facebook, some tendencies toward toxic behaviors can appear, partly because of anonymity. However, social media have established a revolutionary democratization, creating a space in which everyone can state their opinion and are not valued for their titles but for their content. In some way, in the educational field they have brought closer academics, students and the institution. Thus, social networking sites are useful tools, although we have to bear in mind their potentially negative side.

2010, connectivism. Connectivism can be considered the first learning theory born on the internet. It was created by George Siemens and Stephen Downes in 2004-2005. This theory understands the teaching-learning processes as something that occurs inside several environments which are not necessarily controlled by the individual. This lack of control is often seen explicit in the web, where transmediatic browsing facilitates this kind of knowledge construction (which involves a lot of interaction and browsing through diverse platforms). Connectivism started as a base for MOOC, although later their paths diverged.

2011, Personal Learning Environments (PLE). After daily life was interrupted by web 2.0, both students and teachers started to gather 2.0 tools with different purposes. This ensemble of tools, at a particular level, is called PLE. In this sense, the author remarks the importance of taking into consideration that oftentimes having a broad PLE implies joining many platforms that are not always careful with data.

2012, Massive Open Online Courses (MOOC). The MOOC phenomenon includes several technologies or previous concepts derived from the OER standpoint (video, connectivism, web 2.0...). The approach of such courses, according to the author, is good and can be beneficial. However, a lot of advertising has been made and many educative institutions have hurried to subcontract so as to have those courses as quickly as possible.

2013, open textbooks. Open textbooks also follow OER's line. In the United States books can have a price many students cannot pay, and this initiative facilitated the access to them. However, this kind of initiatives are a bit distant to new methodologies, in which the student is an active element (and not a mere receiver) in their learning process.

2014, learning analytics. We generate thousands of data daily whose analysis has repercussions at several levels. In the educational environment and, more specifically, long-distance education, learning analytics can allow to analyze some behaviors that could not be possible in other ways. Such data allow the educator to readjust the learning processes. Nevertheless, in this sense one has to be careful, as it is important to avoid that students are reduced to data.

2015, digital badges. In the beginning, badges caught the educative collective's attention. Even so, they imply certain work and acceptance. In this case, what happened was similar to what happened with e-portfolios: even though they have clear potential, they imply deep changes in educative practices that oftentimes are difficult to achieve because of the effort they imply.

2016, the return of artificial intelligence. Technologically, AI has changed and improved since its beginning in the 80s-90s. In ed tech, it is common to see that nothing changes, even if everything is different. Although there are technological improvements, the main problems persist, ethical issues are more important than technological ones. In reference to said matters, the author considers that maybe the biggest contribution that AI has made has been making us realize that the most valuable thing of the educational system are the people who form it.

2017, blockchain. The author labels it as one of the most astonishing technologies that appear in the book. Blockchain in education allows the creation of a register of achievements and recognitions (both big and small). What is important is that this information, which is transferred from computer to computer, is encrypted and, thus, makes it difficult to fake or hack. In this sense, the danger is that it is a very ambitious goal which requires time and is difficult to universalize.

2018, ed tech's dystopian turn. In this chapter, the author remarks that, as it has been seen throughout the book, what is important is to focus on small objectives that have useful, real, and feasible consequences. To achieve that, it is important to head for the opening of results, algorithms, data... and, above everything, avoid believing in magical solutions. In front of this kind of solutions, more typical of sorcerers than of professionals in education, one must be critical.

Once the journey through the different technological milestones has finished, it is evident, as the author says, that what is important is to focus on small and specific objectives. Big technological discoveries cannot always be applied in a direct or quick way. For that reason, it can be considered that educational technology is a field in constant evolution, but what is more important is not the technology itself, but its use and people.