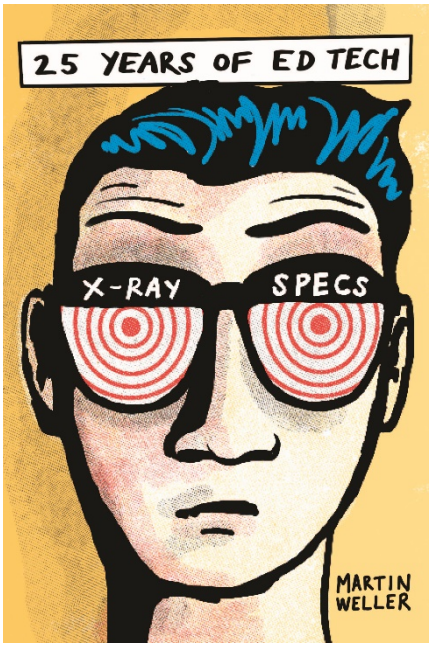
**I**nternational **R**eview of **R**esearch in **O**pen and **D**istributed **L**earning
Volume 22, Number 4

**November – 2021**

# Book Review: 25 Years of Ed Tech




**Author:** Martin Weller (Athabasca University Press, 2020, 208 pages) ISBN: 9781771993050

**Reviewed by**: S. K. Pulist, *Indira Gandhi National Open University, India*

Technology is one of the fastest-changing fields in the modern era, impacting every human endeavour. The field of education is one of the beneficiaries of these technological developments. While some educational institutions have embraced these technological developments with ease, others have been struggling to cope with the shifting expectations and demands of educational aspirants. A historical perspective would throw light on the pace of technological developments and the changing scenarios the educational system has witnessed over the past few decades. The bigger challenge for these institutions is how to cater to the needs of educational aspirants belonging to three different generations (Gen X, millennials, and postmillennials). The volume in hand has accomplished the task of documenting these historic milestones of technological development and implementation in education starting from 1994. The author has given an overview of technology from when it gained prominence and became a significant tool in the hands of educational practitioners rather than from when it came into existence.

The book opens in 1994 when digital content first started catching the attention of educational practitioners. Multimedia content enabled by the Internet facilitated adoption of a networking approach to teaching and learning. The Bulletin Board System that made it possible to connect with people from different places led to the advent of discussion forums and professional groups with specialised areas of interest. The early form of e-learning was delivered this way and terms such as Learning Management System (LMS) and Virtual Learning Environment (VLE) came into being. The author feels that the seeds of specialised global communities were sown with the use of the Bulletin Board System. While tracing the history of the Web back to Berners-Lee in 1989, the author focuses on its use as a social networking platform and communication system connected in 1995. It was an open system, following a decentralised approach, where no one was more important than any other. Thus, the Internet became an organism full of life, regulated by social values with positive and negative aspects. Facebook, WordPress, and Netscape became more than buzzwords. All this happened through dial-up connections where telephone lines were connected to a Web browser through a modem. FrontPage made it possible to create web pages on Angelfire and

GeoCities, and easily publish the content. These platforms provided their own website/page builders through templates. Educational institutions took advantage and created their own websites. Academic content was shared this way. This was version 1.0 of the Web (Web 1.0). Email was the prominent medium of communication for both the masses in general and the teaching and learning communities.

Around 1996, computer-mediated communication emerged as part of the development of the Bulletin Board System, following a generic approach. Education systems used these technologies meaningfully for instant messaging, video messaging, discussion forums, and online databases, among others. The text-based exchange of content was taken over by the exchange of multimedia content in multiple formats through graphical user interfaces. All this could be shared in synchronous and/or asynchronous modes. It was possible to assign different roles to various users as well as different types of permissions to allow them to perform their roles in the online environment. By the start of 1997, web-based learning became the order of the day, and educationists started re-focusing on a constructivist approach to learning. The activity of publishing academic content was democratized, and a movement of non-linear co-creation was seen laying more focus on theoretical aspects of education rather than technology itself. This movement emphasised student-centered learning from multiple resources which could be social and experiential in nature.

The year 1998 marked the entry of the open Web to the field of education in the form of wikis that ultimately culminated in the development of Wikipedia. The content could be created in a collaborative way by a large community of users on wiki spaces. This created an organic body of ever-increasing information and was able to challenge the erstwhile commercial and proprietary mindset. The read-write aspect of the Web gave birth to blogs on special topics. Student-generated content also acquired prominence during this time since it could be used as a learning tool by other students. The author defines 1999 as the year of integration of the different components that made e-learning an in-thing, though the concept already existed. This gave way to a debate comparing e-learning with face-to-face learning. Some of the educational institutions even started venturing into launching online courses. The author considers this period as e-learning's golden age since it paved the way for its mainstreaming. In 2000, the concept of learning objects was introduced to the field of e-learning. These learning objects supported e-learning as the smaller chunks of information could be used, reused, and referenced in different ways. Their formats were standardized in order to facilitate their wider use though the quest to find a standard definition still remained. Their reusability in pursuit of pedagogical effectiveness was questionable, and thus discouraged their use. The author, in this chapter, has tried to identify the causes.

The chapter E-Learning Standards re-focuses on e-learning and learning objects. E-learning became more popular, forcing the community to come up with different standards that could be used to make the business more serious. This facilitated the interoperability of content in different contexts and environments. The Sharable Content Object Reference Model (SCORM) became a standard for the creation of digital content for e-learning platforms. However, as the author puts it, the complexity of standards outweighed implementation costs. The author traces the birth of the learning management system (LMS) to 2002. These systems helped educational institutions to create virtual learning environments (VLE) which are used now for online courses, MOOCs, and blended learning. The LMS was seen as an integrated entrepreneurial solution for educational institutions, and thus became pivotal to the e-learning environment. The virtual classroom and virtual conferencing became ubiquitous to online courses. The year 2003 heralded the use

of blogs in education, leading to the emergence of a community of educational bloggers. The Really Simple Syndication (RSS) feeds made the blogs popular since they provided an easy way to reach subscribers with updates. Blogs have now become part of social media and networking. The author has highlighted some of the negative aspects of such developments, which include racism, misogyny, misleading content, data capitalism, misuse of data, etc.

The author also discusses Open Educational Resources (OER), the seeds of which were sown in the year 2001 with the announcement of the OpenCourseWare initiative. By 2004, the many educational institutions entering the field of OER led to the open content movement. Open content licensing became unavoidable and different organisations came up with their own versions of open licensing. Prominent among them was Creative Commons. YouTube came into existence in 2005. The platform became popular for providing video uploading and streaming services. Other video content sharing platforms also contributed to the movement. This made the creation of video content and sharing with a larger community easy for educators. With this, the concept of a flipped classroom became reality. The move promoted participatory culture at a global level, transcending all geographical barriers, though concerns over cultural value systems remain. The concept of the Web 2.0 became popular in 2006, and the label *2.0* as a suffix could be seen attached to almost everything. This new version of the Web facilitated interactive content and users could both generate their own content and share it with the rest of the world using open data tools. The author gives credit for the granularity of learning content to the Web 2.0. This has led to the development and dominance of social media platforms in public social life.

The year 2007 witnessed a wave of interest of educators in online virtual worlds, though Linden Labs had launched way back in 2003. Second Life was one of the popular platforms for creating 3D objects including virtual characters in the form of avatars. These could be well integrated with an LMS in an educational institution. Lectures could be delivered virtually with these avatars, in addition to finding more creative ways of using them. The author describes how e-portfolios gained focus in 2008. The creation of e-portfolios was important for showing technical and professional expertise and its evaluation. These are pertinent tools in vocational programmes. By 2009, as the author observes, social media took a turn towards education. Social media facilitated connections at a global level and provided a democratic platform for discussion across different areas of specialisation. This resulted in the emergence of social media as a viable and effective tool for marketing and research. However, the author identifies some of the main concerns about the unfettered use of social media. The ease of creating connections, communities of practice, and plentiful content created by users over social media had, by the year 2010, led to a distributed approach to learning in a networked way.

The interactive features of Web 2.0 culminated in the popularisation of personal learning environments (PLE)—more learner-friendly and accommodative, these extended the Learning Management Systems. PLEs shifted the controls to learners, thereby facilitating personalised learning. The year 2012 is popularly known as the year of the MOOC though MOOCs have existed since 2008. However, it was in 2012 that the concept of the MOOC gained attention from educators all around the world. This paved the way for dedicated online learning programmes, and that is how the concept of openness was put to experimentation. Many educational institutions geared up to offer MOOCs to a global community of learners as well as SOOCs for their campus-based students. The extension of openness through OER and

MOOCs led to digital versions of books in the form of open textbooks. Most often these were available for free, while in other cases, a nominal charge was levied to get the open licence. Many research projects studied the effectiveness of open textbooks. The generation of voluminous student metadata on demography, online active time, learning styles, content usage, etc., attracted the technical community to the use of analytics. By 2014, learning analytics became an independent field to be further explored. This helped educators focus on quality aspects of content delivery. Teachers could track the progress of their students and make desirable interventions in the pedagogical process.

The developments in the use of technology in education led to the authentication of student achievement through digital badges. While badges could act as a source of student motivation as part of formative assessment, the educational institutions could also award these badges to students on completion of a programme for presentation to third party agencies seeking proof of completion or achievement. As the author observes, 2016 boosted the discussion on the use of artificial intelligence (AI) in the area of education even more than learning analytics had. The author advocates for the narrow use of AI to handle specific activities in the education ecosystem. In 2017, there was a serious discussion on the application of blockchain technology in education. Certain areas were highlighted as suitable for its use in education, including certification, verification, data ownership, and payment. Educational institutions started experimenting with this technology for providing access to digital certification. However, the author is of the opinion that the complexity of this technology and prevailing issues have discouraged its widespread use. In the last chapter, Ed Tech's Dystopian Turn, the author focuses on trends in the use of technology rather than technology per se. He raises some concerns connected with breach of privacy, border surveillance, data breach, and polarisation, among others.

Some of the chapters in the book emanate from the author's personal observations, which takes the discussion beyond mere representation of history. Quite a few of the chapters deal with topics on tools and techniques that had been in use well before the year marked by the author in the chapter. Therefore, it may not be justifiable to attach their origin or usage to a particular year. For example, learning management systems, virtual learning environments, OER, MOOCs, ePortfolios, etc. were already in existence before the dates mentioned in the book. However, the allocation of a year to a chapter in such cases is probably more indicative of it having become mainstream in teaching and learning in high-income countries. Overall, the author has focused on trends of technology usage when they entered the mainstream.

This review is an overview of some of the nuggets found in the book. It would be interesting to revisit the ups and downs in the education system as these technologies have been embraced over the years. The education system has grown in sync with technological developments and struggled a lot to be technologically relevant. On this note, I feel that *25 Years of Ed Tech* is a worthwhile read, especially for millennials and postmillennials, including policy makers and educators, who are seeking a historical pedagogical perspective.


Athabasca
University


BY