

## How will Education be in one or two Decades?

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*“If you think the fallout in the newspaper business was dramatic, wait until you see what happens to education.”* Seth Godin said it last year<sup>1</sup> and Daniel Molina from GESFOR reminded us at the recent eMadrid<sup>2</sup> Workshop<sup>3</sup>. Advances in Internet technologies have dramatically changed many different sectors: music, tourism, news, publicity, ...

Indeed, music distribution and consumption is not as it used to be. iTunes, LastFM, or Spotify are just a few keywords that come to our mind when we think about music. The traditional channels have changed; the music industry is reinventing itself. Flight tickets and hotel reservations: another intangible good that can be easily bought online. Tourists need no longer the physical travel agencies as intermediaries between them and airlines and hotel chains. New products can be offered, some that bundle services in new ways. The news sector is

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[http://sethgodin.typepad.com/seths\\_blog/2009/08/education-at-the-crossroads.html](http://sethgodin.typepad.com/seths_blog/2009/08/education-at-the-crossroads.html)

<sup>2</sup> <http://www.emadridnet.org>

<sup>3</sup> <http://marge2.uc3m.es/arcamm/item.php?mod=vod&id=88c39731c718c81c3b8544cf86eff425,min 51>

very worried of what will happen next. Newspapers together with radio and TV are not any more the only main references for news. Citizens have now many more sources of information. And what about publicity? Here again the channels have changed. Publicity on the Internet is increasing tremendously. Google is here one of the main drivers. And books? Amazon predicts that e-books will overtake paperbacks by the end of 2011<sup>4</sup>. This means dramatic change in the publishing sector!

In view of these effects on other sectors, do we really believe that the Internet will not affect the education sector? Not just superficially, but drastically, ie. affecting the business models, the players, the ways and channels education is consumed...

Let's look back in time. It was only around two decades ago, that teachers started to digitize content (Microsoft bundled Powerpoint, Word, and Excel into the Office Suite in 1990). Today it is commonplace to use slide presentation tools in class. How many slides have been made for teaching purposes? Uncountable! Today it would

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<sup>4</sup> <http://www.helium.com/items/1912385-amazon-predicts-ebooks-will-overtake-paperbacks-by-the-end-of-2011>

strike more not to see digital slides used in class, than to see them.

Around one decade ago, Learning Management Systems started to be used in educational institutions (WebCT, Blackboard, Moodle and many other similar platforms started to appear in the late 90s). Today, I don't know of any university not using an LMS (although I am sure there are). LMSs are used for organizing educational material for the students, providing discussion forums, carrying out assessments, etc.

What are the trends at present? On one hand, educational content has become richer than simple text documents or presentation slides. Videos, animations, and simulations make it easier to convey ideas and explain concepts. There has been also a tremendous advance in authoring tools, which make it much easier to create such rich material. This rich educational content is useful for distant learning as well as for face-to-face learning in a blended environment. Furthermore, it is fueling informal learning.

Secondly, since content is digital and can be easily shared, it is in fact shared; for money or for free. Complete universities and educational institutions are being created here and there solely based on online education. Moreover, traditional face-to-face universities are starting to offer online curricula as well. Some universities are putting some of their content on platforms like iTunesU or Youtube EDU<sup>5</sup>. Training in companies is also relying increasingly on online tools. Educational content is also

<sup>5</sup> [http://www.youtube.com/channels?s=ytedu\\_mv](http://www.youtube.com/channels?s=ytedu_mv)

shared openly. From initiatives like OpenCourseWare<sup>6</sup>, that is now followed by more and more institutions around the world, to one-man shows like the Khan Academy<sup>7</sup>, the Open Educational Resources movement is gaining presence worldwide.

Sure, it is clear that a degree is much more than just content. Content was also accessible through books. It is content selection, it is the experience with teachers and fellow students, it is lab work, and it is certification. And many other issues, like research, branding, community, location, etc. But do we really believe that advances in Internet technologies will only affect educational content? In relation with lab work, there are efforts underway to enable and facilitate remote access to labs (see for example the GOLC initiative<sup>8</sup>). And as far as interaction between teacher and students and among students is concerned, the digital natives are becoming more and more comfortable with online interaction. Don't they do this every day through social networks? In my experience at our online MSc on e-learning<sup>9</sup>, I get often more and deeper interactions with online students that are around the globe than with face-to-face students that seldom show up to class or when they do, are absent-minded.

I am sure that in the near future, new players will appear that will fill in some gaps and identify new business models. Possibly educational content will be split into smaller

<sup>6</sup> <http://www.ocwconsortium.org>

<sup>7</sup> <http://www.khanacademy.org>

<sup>8</sup> <http://www.online-lab.org>

<sup>9</sup> <http://learn.uc3m.es>

chunks for a more flexible consumption. If education has changed from lengthy manuscripts and boring massive lectures to rich open educational resources and social technology-enhanced learning overcoming distance in just a few decades, what will happen in one or two decades from now? Looking at other sectors, it seems very likely that the education sector will also be struck dramatically. We have exciting times in front of us!



Carlos Delgado Kloos got the M.Sc. degree in Telecommunications Engineering from the Technical University of Madrid in 1978 and the M.Sc. degree and the Ph.D. degree in Computer Science from the Technical University of Munich in 1980 and 1986, respectively. Since 1996 he is Full Professor of Telematics Engineering at the University Carlos III of Madrid, where he is the director of the on-line Master's programme on e-Learning <learn.uc3m.es> and of the Nokia Chair at his University. He is also Associate Vice-Rector of International Relations.

His main current research interest is centered on educational technology. He has been involved in more than 25 projects with European, national and bilateral funding. He is presently the coordinator of the eMadrid network, a major research initiative around e-learning in the Region of Madrid. He has published more than 200 articles in national and international conferences and journals. He has further written a book and co-edited five. He is IEEE Senior Member and the Spanish representative at IFIP TC3.