

**Part I** - [Part II](#) - [Part III](#) - [Part IV](#)

---



A few short decades ago, relatively few people were concerned with learning while many were with “education”. Education was, by and large, seen as a process of exposing people to content in a structured way (the curriculum) because this was good for them and would provide them with the intellectual tools and knowledge needed for lifelong, productive employment. It was assumed that “school [education] prepares people for life” and that, once people left the system, they had everything they needed for gainful employment in their chosen field or profession for the rest of their lives.

Ah, the bad old times!

When knowledge was being created by society at a relatively slow pace -up to and including the 19th century- it was indeed the case that many doctors, lawyers, engineers, architects, historians, school teachers, accountants, bankers, merchants, publishers, farmers, priests and

nuns, nannies, university professors, politicians, and just about anybody else could, indeed, rest assured that the knowledge base they had with them upon graduation from high school and college would be adequate for the rest of their working lives. After all, the level of research in many of these fields was fairly low, dissemination of new information was slow (usually by print), and social attitudes toward innovation and change did not begin to shift toward the positive until the second half of the 19th century. Case in point: Darwin's theory of evolution was hotly debated when it was first published, and not just because of the "horrid" thought that man could be related to primates, but also because it went fundamentally against beliefs that had been held with religious fervor for centuries.

Education was seen as a process through which ignorant people were provided, through several years of schooling, with the intellectual tools (mainly reading and writing) to become "productive members of society". In the late 19th and early 20th century the current paradigm of schooling was set, responding in part to the economic demands of the times for workers that could be trained more easily for jobs in assembly lines. Not being able to read and write made a job at the factory impossible and even dangerous for others -for example, from not understanding warnings.

Higher levels of education (measured as average years of schooling) have been linked to increased levels of economic activity and social well-being. The equation calculated around the world has been fairly simple: As more people stay in school longer, increasing their knowledge base and ability to learn, the higher the chances that a country's economy will flourish. This has been the fundamental reason for the massive levels of investments in educational infrastructure around the world, particularly in the second half of the 20th century.

Regardless of their location, educational institutions everywhere have followed closely the evolution of the mass media. With each new medium, "techno-enthusiasts" have made bold statements about their power to transform (for the better) education and learning. Radio was

going to overcome all distance barriers. Films (movies) would add the richness of visual communication. Television would overcome distance and time by allowing the best teachers (in the typical scenario) to be seen and heard by students anywhere. Computers, starting in the 1970s, were going to transform the way every subject was taught because of their ability to process and present large volumes of information. And over the last 5 years, the Internet is said to be changing the way we work, play, communicate AND learn -according to the tag line used by Cisco Systems, one of the major providers of Internet-related hardware.



While each medium has seen its glory days come and gone as THE education and learning medium of choice, we're only at the beginning of the cycle for the Internet. However, there are some reasons to believe that all the hype surrounding this latest medium may amount to something more. First of all is the Internet's unprecedented ability to integrate the media that came before it. Text and image (print), voice (telephone), audio (radio), and video (film and TV) are available to Internet users using computers at home, at work, and pretty much anywhere they can find an access point to the telecommunications networks. Second, it's a medium that decentralizes the production capabilities, so that instead of the one-to-many of the mass media we now have many-to-many. Third, the nature of the medium itself encourages interaction not just with the content presented but also with the producers and with other consumers. Fourth, much of the content is available for free (after the users have made the not-insignificant investments in computers and access fees). Fifth, access to content from outside one's borders is not an issue (in most cases), since the network does not stop to recognize national boundaries.

There are many other reasons, of course, but I'll stop there because those first five support the

key argument I would like to make in closing. Learning is about curiosity, and by giving us the ability to recognize ourselves as immensely curious beings, the Internet will have a profound impact in our attitudes to what we don't know. For the first time, perhaps, since the printing press allowed the masses access to knowledge and information that had been limited to a few, the Internet will be the driving force that changes educational institutions around the world, and what people expect they will be able to do in order to gain access to learning opportunities wherever they are, at times convenient to them, and -most crucially- regardless of who they are.

Pedro Hernández-Ramos

You can contact Pedro Hernández-Ramos at: [pehernan@cisco.com](mailto:pehernan@cisco.com)

**Part I - [Part II](#) - [Part III](#) - [Part IV](#)**

<http://www.zonezero.com/magazine/articles/hernandez/hernande1.html>

