

## Chapter 8.20

# Next Generation: Speculations in New Technologies

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### ABSTRACT

Next-generation course management systems (CMS) are likely to take advantage of today's applications' structural and pedagogical limitations, supporting student and inter-collegiate collaboration. They should also be influenced by developments in social software and pre-existing information-sharing projects. CMS will reach out to the larger world to integrate with global informatics initiatives.

### INTRODUCTION

*The Internet will reveal the true hierarchy of good, because what is at stake is the essence of language: freedom. This hierarchy is complex: hyper-textual, interwoven, alive, mobile, teeming and spinning like a biosphere. (Pierre Levy<sup>1</sup>)*

Had Levy invented CMS, perhaps he would have imagined the now-available next-generation systems differently:

*Catherine visits her course spaces after morning coffee, two hours before her first class of the day. Opening the main Web browser on her tablet, she scans her portal for today's information. Content feeds from sociology and French show activity, including an argument about Habermas (again), notes from the verb study group's leader, and three responses to her blog writing: one comment and two trackbacks to other blogs. But they aren't urgent this morning, so she marks them for later perusal. The morning class reading reappears, a chapter from Mary Shelley's last novel, with further comments and annotations attached, largely from her classmates. As she considers these collegial intertexts, a flurry of instant messages, or IMs, erupt alongside the reading. She greets several (two friends, a high school student with a question), then updates her away message to insist that she's "really busy studying." Switching over to her research project's feed, Catherine finds from video imagery and data streams that the Icelandic volcano has cooled slightly, and that her Swedish and Malaysian colleagues consider this well within their models. On a creative impulse, she grabs*

*a screen capture of the caldera, adds it to her current video autobiography, and sets the editor to “rendering.” She also copies the image to her course space profile, thinking it a dramatic yet economical way of representing herself and her geological interests. Maybe another volcanophile will inquire about joining her team—they really want a librarian this month.*

*This reminds her of her reading for the impending class. Catherine reflexively searches for commentary on *The Last Man* (1826), adding to her personal wiki notes, then posting annotations with links to sources: a London professor’s semantic analysis (both data set and commentary) and a Toyko high school class’s discussion with some interesting reactions. Her trackbacks to their Web sites might trigger follow-up IMs, e-mails, or posts to her blog. Thinking about how this will look to future readers within the learning object her professor assures her the class discourse will become, she revises her prose to a more scholarly pitch, then races out the door, tablet under her arm.*

*During the discussion, Catherine builds out loud on a point she made in course space. While conversation moves on, she takes notes but copies class notes on her earlier topic into a spin-off space, add links from her professor and fellow students, pastes in a copy of her earlier wiki and annotation comments, links to a social search query for two keyword combinations, then saves the new entity in an encrypted folder for later development. It might be the materials for a paper. Just before the end of class, Catherine notices that her video editor has finished rendering her updated film, so she uploads the entire clip to her blog, checks its permissions (“use freely, with acknowledgment”) and awaits comments from friends around the world.<sup>2</sup>*

As we’ve seen throughout this book, the current generation of CMS has grown rapidly, succeeding in being adopted across higher education

with impressive speed. In order to apprehend the CMS landscape, it is important to consider the dynamics of that success in order to examine each application’s formal features. Extensive adoption stems from several factors, each of which strikes at the heart of campus informatics. To begin with, compared with many other digital tools used for various purposes in higher education, CMS are relatively easy to support. Although stories about slow customer response are widespread, the software does not require external training (compare with Oracle™ geographic information system tools, or Director™), massive installation processes (compare Banner™), or complex interactions with rapidly changing software and hardware environments (such as digital video). Additionally, CMS have been embraced not by early adopters, but also by the broad technological middle of campuses, generally, extending the reach of computer-mediated teaching and learning, a major instructional technology goal.

These CMS have also taken the lead for a major external reason, in that they serve as shields from the copyright struggles currently raging throughout the United States and intervening in many levels of campus life. The Digital Millennium Copyright Act (DMCA), which came into effect in 2000, poses a restriction on fair use (itself enshrined in the 1976 Copyright Act) in its blanket prohibitions of unauthorized access through anticircumvention technologies.<sup>3</sup> At the same time, the Motion Picture Association of America (MPAA) and, especially, the Recording Industry Association of America (RIAA) have fostered a climate of copyright wariness, and sometimes fear, with their subpoenas and take-down campaigns aimed at colleges. Yet the leading CMS offer a rare bright spot in this gloomy landscape by taking advantage of the TEACH Act (2002). This law allows a fair use defense for educational use of digital materials, so long as such usage occurs within a closed classroom environment. That is, materials can be copied

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