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Toward a 21st century education:

Which Will Be the First College To Go Bookless?

By Marc Prensky

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The Recent news that South Korea plans to digitize its entire elementary- and secondary-school curriculum by 2015, combined with the declining cost of e-readers and Amazon's announcement earlier this year that it is selling more e-books than print books, prompts an interesting question: Which campus will be the first to go entirely bookless? Not, of course, bookless in the sense of using no book content, but bookless in the sense of allowing no physical books. My guess is that this will make some institution famous.

Already, just about everything that an undergraduate needs to read is available in electronic form. Whatever isn't there electronically, librarians, students, or professors can easily scan, as many already do.

Some colleges are already heading in this direction by requiring or handing out iPod Touches, iPads, Kindles, or Nooks, often preloaded with textbooks and other curricular materials, or by disallowing paper texts for online courses. But I suggest that it's time to go much further: to actually ban nonelectronic books on campus. That would be a symbolic step toward a much better way of teaching and learning, in which all materials are fully integrated. It could involve a pledge similar to the one that language students and instructors at Middlebury Language Schools take to speak only the foreign languages in which they are immersed during the study program.

In this bookless college, all reading—which would still, of course, be both required and Encouraged—would be done electronically. Any physical books in students' possession at the beginning of the year would be exchanged for electronic versions, and if a student was later found with a physical book, it would be confiscated (in return for an electronic version). The physical books would be sent to places and institutions that wanted or needed them. Professors would have a limited time in which to convert their personal libraries to all-digital formats, using student helpers who would also record the professors' marginal notes

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Why, in a world in which choice and personal preference are highly valued, would any college want to create such a mandate? Because it makes a bold statement about the importance of moving education into the future. It is, in a sense, only a step removed from saying, "We no longer accept theses on scrolls, papyrus, or clay tablets. Those artifacts do still exist in the world, but they are not the tools of this institution." Or: "In this institution we have abandoned the slide rule. Those who find it useful and/or comforting can, of course, use it, but not here."

Let me be clear that I'm not advocating that we get rid of the good and valuable ideas, thoughts, or words in books—only that we transfer them to (and have our students absorb them through) another form. Much of what our students need to study is already in the public domain and can easily, in instances where it hasn't already been done, be converted to electronic form. Most contemporary works exist electronically, as do a huge number of historical books and documents. This would be an incentive to scan more of them. It would also provide an opportunity for academics and others to consider how notions of intellectual-property rights might need to be updated for the digital age.

Of course, pushback is to be expected. I think less of it would come from faculties in the sciences, who feel most deeply the need to connect information more completely and be sure it is up-to-date, than from humanities faculties, who often teach particular physical books (and might tend to be far more attached to them). Such a mandate might not go over well with all students, either, at least at first, because many have been inculcated since birth to appreciate the value of physical books.

But I believe the change would be transformational, in very positive ways for education. Once the change happened, the college and its professors would be expected to enhance all electronic texts in useful ways. Student materials might contain not just the commentary of the individual professor but of professors all over the world. A student's *Hamlet* might contain not just the notes that a student would find in a print edition but collective notes from actors, directors, scholars, and other contributors. The college's version of *Hamlet* might be linked to whatever notes Laurence Olivier or Harold Bloom had written in the margins of their own copies. It might be linked to scenes and versions already on YouTube , or to open courseware from institutions around the world.

Selecting and curating such enhancements to enlighten students without overwhelming them would be the responsibility of the professors. They could build in questions that would prompt reflection and discussion, and have those discussions shared classwide, campuswide, or worldwide. Students could keep online records of all their notes, thoughts, and readings; and, unlike with traditional college texts, they could find, collate, and link to those notes and records forever.

Many entrepreneurs are already inventing software that allows the quick and fertile connection of one's ideas and those of others, but an all-digital campus would provide a powerful incentive to develop those programs even faster and take them further. Various

all-digital campuses could collaborate to develop specifications for such helpful software as well as open-source tools.

Sure, it will take some transition time to get to the all-digital college, but the advantages are many.

First, we would wean students (and scholars) off the physical books of the past, just as they were once weaned off scrolls when new and more efficient technology came along. I have heard all the arguments for the physical book, from the "feel of the page" to the effects of "printed vs. on-screen words" to the "way we take in information" to the fact that "a book lasts a long time." But those arguments are unconvincing when weighed against the many advantages of going all-electronic. Far better than having colleges preserve the use of physical books for certain advantages would be for colleges to find ways to ensure that we can achieve all the results we want with the integrated tools of the future.

Second, books—and commentaries on books—would start to be connected in ways they aren't now. We could actually search for the source of a particular quote, or for comments on particular ideas and passages, in ways we can't even begin to do today. Yet the integrity of the individual work would still be preserved.

Third, and I believe this to be the greatest advantage, ideas would be freed from the printed page, where they have been held captive for too many centuries. In addition to being a dissemination mechanism and an archive, the physical book is, in many ways, a jail for ideas—once a book is read, closed, and shelved, for most people it tends to stay that way. Many of us have walls lined with books that will never be reopened, most of what is in them long forgotten.

But what if all those books were in our pockets and could be referred to whenever we thought of them? The idea of having one's own personal library of physical books, so useful in earlier times, is no longer worth passing on to our students; the idea of building a digital pocket library of books that students could visit and revisit at any time certainly is.

Colleges and professors exist, in great measure, to help "liberate" and connect the knowledge and ideas in books. We should certainly pass on to our students the ability to do this. But in the future those liberated ideas—the ones in the books (the author's words), and the ones about the books (the reader's own notes, all readers' thoughts and commentaries)—should be available with a few keystrokes. So, as counterintuitive as it may sound, eliminating physical books from college campuses would be a positive step for our 21st-century students, and, I believe, for 21st-century scholarship as well. Academics, researchers, and particularly teachers need to move to the tools of the future. Artifacts belong in museums, not in our institutions of higher learning.

So will your campus be the first to go bookless? It's a risky step, certainly, but one that will attract forward-thinking students and professors, and be long remembered.

Marc Prensky is an educational author and software designer. His book Teaching Digital Natives: Partnering for Real Learning *was published by Corwin in 2010. His next book,* From Digital Natives to Digital Wisdom, *will be published by Corwin in January.*